A

# TREATISE

ON THE

REGULAR, IRREGULAR, ATONIC, AND FLYING

# GOUT:

CONTAINING

MANY NEW REFLECTIONS ON ITS CAUSES, AND MANAGEMENT UNDER VARIOUS CIRCUMSTANCES AND CONSTITUTIONS.

WITH

THE EXCELLENT EFFECTS

OF

## THE MURIATIC ACID

IN THE RELIEF OF THAT DISORDER.

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BY

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# INTRODUCTION.

THE diſorder called *Arthritis*, or Gout, has been the torment of the affluent in all ages: phyſicians, regular and irregular, viſioniſts, and projectors, have delivered a multiplicity of doctrines and modes of treatment; but with what ſucceſs, let the reflecting phyſician and the afflicted determine. Medicine has made little or no progreſs towards a radical cure for this inveterate diſtemper: nor has any conſiſtent modes of treatment been eſtabliſhed to alleviate with ſafety the ſymptoms, as they occur in different conſtitutions. If a ſurvey be made of the numerous writings on the gout, it would be thought, the ſubject was exhauſted: if their utility be ſcruniſed, it will be found that little has been ſaid to anſwer any very important purpoſes in the cure. The reaſons are, in ſome

meaſure, obvious. Whoever held out the enſign of victory over this formidable enemy, however abſurd the means, met with warm attention from the afflicted; whoever pointed out the ſtrong poſts of this inimical diſturber of human tranquillity, the difficulty of attack, and the probability of defeat, was ſure of being diſregarded. The former includes the innumerable hoſt of deluding empirics; the latter, of the learned, experienced, and ſkilful regulars, in all ages. The encouragement empiriciſm has ever met with, has been an inducement to freſh adventurers to exerciſe their deceptions on the afflicted; the diſcouragement regular phyſicians experienced for their integrity, has, I am induced to believe, rendered them leſs ardent in attempting new diſcoveries, even to alleviate the miſerable ſymptoms. When gouty patients were found unjuſtly ſuſpicious, or expected impoſſibilities, phyſicians appear to have been cautious or negligent in exerting their faculties in their relief. Confidence in the patient was as eſſential, as ſkill in the phyſician: the arthritics, not without ſome reaſon, had little or no confidence in phyſic;

ſic; therefore they have been often left to the mercenary deluſions of empiriciſm.

Having many years ago reflected on the obſtinacy of the diſorder, the failure of phyſic in its relief, under the guidance of the moſt celebrated phyſicians, I reſted ſatisfied that little could be added productive of any eſſential benefit. An accidental circumſtance, however, which will be fully explained hereafter, led me to reconſider this diſorder, ſo juſtly called the *opprobrium medicorum*, and I am inclined now to think that the ſubſequent obſervations may be worthy of attention. It is acknowledged the ſubject has ever been ſurrounded with obſcurity; therefore indulgence is claimed, and, no doubt, will be granted, by the candid in the profeſſion, equal to the difficulty of the inveſtigation attempted.

The gout has been known in the remoteſt ages of antiquity, and conſidered difficult or impoſſible to cure. The *Greek* father of medicine, *Hippocrates*, above two thouſand years ago, ſays, what has been a melancholy truth in all ſucceeding times:

" But

" But concerning the afflicted with the " gout, the following may be pronounced: " thoſe, who in old age have indurated " *tophs*, or *calloſities* of the *joints*, or endure " a *miſerable life* with *coſtiveneſs*, all theſe, " certainly, in my opinion, cannot be cured " by human art *."

The excellent and elegant claſſical writer, *Celſus*, who flouriſhed at *Rome*, ſome centuries poſterior to Hippocrates, in the Auguſtan age, or ſoon after, ſays, " Some by " drinking *aſſes milk* have prevented the " gout from returning. Others by ab- " ſtaining from *wine*, *mulſe*, and *venery* " for a year have rendered themſelves ſe- " cure from it all their lives. This me- " thod is to be purſued after the ceſſation " of the firſt painful attack †."

The aſſertions of *Hippocrates*, under the circumſtances deſcribed, of the incurableneſs of the diſorder, have been, are, and,

* Hippocrat. lib. ii. Prædict. ſect. ii. p. 92. Edit. Foeſii, 1657.

† Celſus de Medicina, lib. iv. cap. 23.—Pliny recommends a milk diet, lib. xxviii. cap. 9.

moſt

moſt probably, for ever, will continue ſtrictly true.

The methods of cure recommended by *Celſus*, in which, *wine*, *venery*, and *mulſe* are to be abſtained from, and *aſſes milk* drank for a time, has an apparent probability of ſucceſs; after the ceſſation of the firſt attack, as he expreſſes himſelf—*idque utique poſt primum dolorem ſervandum eſt, etiamſi quievit* *.

This mode of treatment, however, cannot ſucceed, according to my own experience, except under the following conditions:

I. That the gout be not hereditary †.

II. That

* *Celſus* recommends nitrous baths in gouty fits.

† This has been diſputed by ſome, who I believe never ſaw much practice, therefore incompetent judges; but there are many proofs of *hereditary gout*. — *Aurelianus* ſays, (*De morbis acutis & chronicis*, lib. v. cap. 11., before the time of *Galen*, who was phyſician to *Commodus*, and other emperors) "It ſeems to many of the ancient phyſicians alſo, "that the gout is transferred in a *regular hereditary courſe* "by the ſemen, and for this very reaſon invades ſucceeding "generations, which we have ſhewn, chiefly in *the books of* "*anſwers:* (theſe books have not reached our times.) It "is likewiſe proved to frequent ſome particular countries, "as *Caria*, and the neighbourhood of *Alexandria* in *Egypt*."

The

II. That the patient has not drank wine from infancy, nor been guilty of great exceſſes in food or wines at ſchool, college, or afterwards through life.

III. That the viſcera be ſound, and no material diſeaſe has injured either the natural, vital, or animal functions.

IV. That the gout be recent.

V. That the firſt attack be not late in life, and the patient no ſpirit drinker.

VI. That the patient can ſuffer the

The ſame author ſays, "The antecedent cauſes are va- "rious, as *free drinking*, *ſharp cold*, crudities, too much ve- "nery, immoderate exerciſe, or a ſudden ceſſation of ac- "cuſtomed exerciſes."

*Alpinus*, the modern, who lived ſome years in Egypt, ſays, "Arthritici multi ibi exiſtunt, ex multis humoribus "crudis." Lib. i. cap. 57. Medicina Ægyptiorum Alpini.

There are many inſtances recorded of hereditary gout. In Miſcellanea Curioſa for the year 1677, p. 21, vide Obſervat. *Simonis Schultzii*, where are ſome proofs. *Boerhaave*, aphor. 1255. Compendium Medicinæ *Zuingueri*, p. 478. De Generatione Morborum of the great *Hoffman*, ſect. i. cap. 10. *Jünghen* Praxis Medica, p. 78. Obſervationes, lib. ii. p. 506. *Plateri*. Tractatus de Arthritide Sydenhami, &c. &c.

I attended a boy who laboured under a regular fit of the gout, who was but five years old, and whoſe father died of that diſorder at an early time of life. I have ſeen other inſtances of *hereditary gout*.

changes

changes of diet without riſking the production of dropſy, debility, or more dangerous diſeaſes than the gout.

Without all, or moſt of theſe conditions, it will be vain and irrational to expect a radical cure of the gout from a *milk diet*.—Arthritics, who have paſſed through life liberally, ſink under ſuch a regimen, and the hazard of injury is ſoon diſcovered to be greater than the proſpects of cure. If a *milk diet* had been ſo efficacious as repreſented, its reputation muſt have been permanently eſtabliſhed in a period of two thouſand years; but as the reverſe is the fact, little is to be expected from this ancient preſcription, except in very rare inſtances.

Numerous imitators of antiquity, either from credulity or out of complaiſance, for it could never be from conviction, have continued to recommend a *milk diet* in their writings as a certain cure for arthritics.—In *Miſcellaneâ Curioſâ*, in *Sydenham*, *Boerhaave*, *Hoffman*, *Chyene*, *cum multis auctoribus aliis*, may be found this lacteal regi-

men adviſed as a ſovereign remedy in the gout.

One practical obſervation need only be advanced on this doctrine: whoever drinks *milk* as a cure for the gout, ſhould relinquiſh all the pleaſures of the table, wines, ſpirits, and fermented liquors: how long *arthritics* will purſue ſuch a courſe, experienced phyſicians may eaſily imagine. To change the accuſtomed free diet late in life for meagre cold foods is an experiment *replete with danger*, and the gouty are, in general, too ſenſible to acquieſce in ſo precarious or prepoſterous a project.

A late writer, the learned *Cocchi*, purſues a middle courſe, which is certainly more rational; but he has had but few followers, though many admirers. "The gout," ſays this writer, "can be *prevented* or *cur-*
"*ed*, or very much *mitigated*, by a *milk diet*
"mixed with *plenty* of vegetables, and a
"*ſpare animal food.* Not only the gout and
"the diſeaſes of the joints may be remov-
"ed, or greatly alleviated by the Phytha-
"gorean diet, but in general all the evils
"ariſing

" arising from too great a vigour of the " solids*."

It should be remarked, that he wrote and lived in Italy, a country where vegetables are much eaten, and where they are more nutritious than in our island: but I do not recollect in all my travels through Italy or other countries, ever meeting with one person, who had been radically cured of the gout by the *Pythagorean diet*, so extolled by *Cocchi*; nor by abstinence from *mulse*, *wine* and *venery*; nor have I ever seen any gouty physician in England, or any other country, follow the *milk regimen*, &c., or risk the injury of his own constitution on even the authority of *Celsus*, *Boerhaave*, *Hoffman*, *Cocchi*, or any other medical writer, ancient or modern. It may be inferred from this circumstance, that *milk* never *did*, *can*, nor *will*, *cure the gout*, except in rare instances, and under the conditions already premised †.

With

* *Antonio Cocchi* del vitto Pitagorico, p. 63 and 64.

† *Limburgi* ad *Llanham* degit *Dominus de Wallendorf*, jam atrociſſimis doloribus podagricis excruciatus, qui tandem cura lactis, et optimâ obſervatâ recuperavit ſanitatem.—

With regard to a certain and radical cure by any diet, it is conſidered next to impoſſible, as the conditions premiſed are ſo ſeldom found in practice. It is but juſt, however, to ſay, that *much* advantage may be gained by *proper regimen* and judicious medicine. The fits may be rendered more diſtant; the habit may be fortified, ſo as to receive the attack with leſs injury: but whoever expects a perfect cure by *low diet* and *milk*, or by any other confined plan, unleſs the diſorder be recent and all the viſcera ſound, will moſt aſſuredly be diſappointed. Theſe facts, by long experience and attentive obſervations on various projects of diet, are fully confirmed.

From a ſerious examination of all that has been attempted by ancients or moderns, regulars or irregulars, who have amuſed arthritics at different periods, as likewiſe from minutely examining the cauſes, effects, and nature of the diſeaſe itſelf, it is

Single inſtances may be produced, and they have been often prematurely publiſhed, when afterward the unfortunate patients have returns of the diſorder moſt diſtreſſing, which my own experience confirms.

declared, in general, *incurable.* All that is intended to be advanced in the following treatiſe is to aſcertain the cauſes of the gout, and to palliate with ſafety, and by judicious practice, this horrid diſtemper, under various ſituations.

The objections advanced concerning *milk diet* in all caſes, not to mention abſtaining from *wine* and *venery*, which few will agree to, are equally applicable to every other *narrow* project of diet, or any particular medicine, regular or empirical. The adminiſtration of diet, judiciouſly adapted to the habit of different patients, merits commendation; but the dangerous prejudices, adopted at different periods, of preſcribing to different and even oppoſite conſtitutions exactly *one plan of cure* or *diet*, originating perhaps, from a *ſingle inſtance* of ſucceſs, demands the ſevereſt cenſure. The miſfortunes attending ſuch infatuations, ſuch temporary deluſions, the afflicted in the gout and chronic complaints have often had ſevere reaſons to lament, and may now pronounce with juſtice, as the poet Ovid did

did formerly, above eighteen hundred years ſince:

*Solvere nodoſam neſcit medicina podagram* *.

After what is premiſed, the ſcope and intention of the preſent treatiſe may be in-

* The following examples of longevity, by diet, if to be depended on, are curious and intereſting:

Dr. Cramer, firſt phyſician of the Imperial army in Hungary, met in Walachia men one hundred and ninety years old, and a great many of upwards of one hundred, who were ſufficiently ſtrong to follow the plough and perform their daily labour in huſbandry. He firſt thought that the air, water, or ſome other particulars of the place, cauſed this unuſual longevity; but finding the Turks in the ſame valley, and ſituated by the ſame river, lived only to the common age, as likewiſe the Imperialiſts on the higher part of the river, he minutely inquired into the cauſes. He found theſe long-lived people were a particular ſect of Greek Chriſtians, called Ráytzes, who, by their tenets, were obliged to keep faſt one day in the week; they waſhed and bathed very often; abſtained from all animal food, and all ſpirituous and fermented liquors. They are content with bread of a Turkiſh corn; they eat fruits and vegetables in ſeaſon; their drink is water out of the Danube; they daily eat ſour crout (*braſica muriatica*) in great quantity, and alſo ſouriſh broths †.

This diet, ſo ſalutary to the people who practiſe it, cannot be purſued by others, unleſs it be commenced in infancy; but ſome part might be received into the daily aliment of moſt perſons with ſafety, and not without advantage.

† Commercium Literar. Noricum, 1740, p. 21.

troduced,

troduced, commencing with the hiſtory of a *new diſcovery* very efficacious in alleviating the gout during the paroxyſm.

About twelve years ago, a gentleman of rank, much afflicted with the gout, feelingly lamented, that phyſicians in England were greatly embarraſſed in ſafely alleviating the exquiſite pains during the paroxyſm, and aſſerted, that the moſt excellent effects had been experienced by himſelf and many of the French nobility, from the uſe of a bath and cataplaſm under the direction of a perſon, who did not pretend to poſſeſs medical knowledge *.

During my attendance on the gentleman in a fit of the gout, being ſtruck with theſe encomiums on the *Pariſian* remedy, I determined to purchaſe ſome, and make trials of its utility. I had reaſons to be ſatisfied. The authority and teſtimonies, likewiſe, in favor of the baths, &c., were ſo reſpectable, and the inſtances of ſucceſs,

* The cataplaſm was compoſed of duck weed and a liquid, which ſeemed to be prepared antimony in common water, or ſome ſulphureous ſtinking ſimilar preparation.

as

as repreſented to me, ſo numerous and intereſting, that, animated with the proſpect of alleviating human miſery, I determined to introduce their uſe, if poſſible, in this country.

After repeated trials of the beneficial effects of this French compoſition, owing to the uncertainty of procuring it, and its exorbitant price, I was induced to attempt the diſcovery of ſo valuable an acquiſition, and ſucceeded: it proved to be the *muriatic acid* a little diſguiſed *.

The following ſheets will contain its analyſis, the mode of preparing the baths, their uſe, and alleviating effects; for it is not uſhered to the public as a *cure* for the gout, though, perhaps, it approaches nearer to that character than any remedy ever yet diſcovered.

* The price was a *louis d'or*, or nearly a guinea the phial. The original author, in a letter I lately ſaw to the gentleman who firſt acquainted me with the remedy, ſays, he has *cured* the gout by bathing once or twice a month, and is certain of rendering the fits more diſtant and ſafer to the conſtitution: he has uſed the remedy above twenty years amongſt divers perſons in France. The beſt pans for bathing are of Mr. Wedgwood's manufactory.

It

It is not merely to introduce this remedy, that this treatiſe is written, but to deliver ſome new obſervations and improvements, the reſult of long experience, in the management of the gout under various circumſtances and conſtitutions, and to aboliſh, if poſſible, all *confined practice* in a diſorder ſo various in its attacks, violence, and effects. This part, whether the baths be approved of, or not, it is preſumed, may be found uſeful to the afflicted, and be a means of eſtabliſhing a conſiſtent practice, if not in the *cure*, for that is conſidered generally *improbable*, yet in the alleviation of that painful enemy to human happineſs.

The definition, ſymptoms, and deſcription of the *regular*, *irregular*, *atonic*, and *flying gout*, are briefly delivered. What has hitherto been attempted in the cure is next recited with animadverſions on all the doctrines and practices.

The real cauſes of the gout, from a variety of facts and reaſonings on the ſtate of the blood, &c., are next ſtated; in which is an attempt to account for the action of

the *muriatic acid* baths; in mitigating the pains during the paroxyſm, and ſometimes enabling patients to walk in a few days *.

Laſtly, is conſidered, the neceſſary treatment of the gout under all its calamitous ſymptoms, and in various conſtitutions; as the pallid, the florid, the corpulent, the lean, the irritable or non-irritable, the young, the aged; the recent and inveterate gout, &c. &c.

It was impoſſible, in this part, to give rules adequate to all conſtitutions and circumſtances; for human character varies *ad infinitum*, and it requires no ſmall degree of penetration to diſtinguiſh this diverſity in nature, ſo as to apply it ſkilfully in the art of medicine; but phyſicians, who ſtudy it moſt and vary their practice accordingly, will be moſt ſucceſsful in curing diſeaſes.

*Saville Row,*
October 8, 1792.

* I by no means agree with ſome modern hypotheſes, which would declare that morbid changes in the blood and fluids are not the cauſes of many diſorders. I pledge myſelf to prove the contrary, upon ſuch ſolid grounds, and by ſuch convincing arguments, as to leave the ſubject ſcarce diſputable.

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A TREA-

A

# TREATISE

ON THE

# GOUT.

THE Gout is a violent, painful diſorder, which periodically attacks the membranous and other parts of the joints *.

## *Symptoms.*

To enumerate all the ſenſations that accompany this painful diſeaſe, as they happen to different patients, would enlarge this treatiſe beyond its intended limits;

* Arthritis, vel *Morbus Articularis*, or what we call the Gout, is derived from ἄρθρον, *articulus*, or joint. The Gout may be ſtrictly defined to be a diſeaſe of the articulations, which diſtinguiſhes it from the rheumatiſm, which is a diſorder of the *tela celluloſa* of the carnous part of the muſcles between the junctures, though ſometimes confounded with the Gout.

the general ſymptoms, therefore, ſhall be conciſely delivered.

Previous to a fit or paroxyſm of the gout, patients, more or leſs, perceive loſs of appetite, flatulency, a bitter taſte in the mouth, nauſea, and ſometimes vomitings; acid eructations; heartburn, as it is called; coſtiveneſs, purgings, thirſt, unuſual heats, and cold ſhiverings; coldneſs in the extremities, ſlight fevers, fluſhings, pains in the head, drowſineſs after meals, laſſitude, dejection of ſpirits, reſtleſſneſs, mental perturbation, iraſcibility on trifling occaſions, anxiety, timidity, and, in ſhort, the whole claſs of nervous affections *.

When the fit commences, an acute, violent pain is felt in the joint of the great toe, with throbbing and heat; the leaſt motion, and often light preſſure, cauſe exquiſite torture: theſe are ſucceeded by immobility of the juncture, ſwelling, redneſs, and a ſhining ſkin; feveriſh ſymptoms, as quickened pulſe, and thirſt accompany all the other evils.

* Theſe are numerous, as the book on Female, Nervous Diſeaſes, &c., fully proves.

Theſe

Theſe diſtreſſing ſenſations continue, with temporary remiſſions, for a longer or ſhorter period. The feet are generally attacked alternately, and all the ſymptoms are more or leſs violent, according to the conſtitutions of patients and the violence of the attack; and they have more or leſs of theſe affections in proportion as patients be ſtrong and vigorous, or infirm and debilitated, or as the diſorder has ravaged ſhort or long in the conſtitution; for it is ſcarcely ſimilar in any two athritics, either with regard to violence or duration. After the paroxyſm has continued, with various changes and ſhort temporary remiſſions, for days or weeks, the urine commonly depoſits a lateritious ſediment of calcareous particles, or is very turbid. The pain and fits then gradually become weaker and terminate, leaving the afflicted lame and debilitated. This ſpecies of gouty fit is called *regular*, though nothing can be more *irregular*, either as to the mildneſs or fury of the attack, or its continuance in different habits.

After the fit the patient gradually has an apparent return of good health for a longer or ſhorter period. In autumn, winter, or ſpring ſeaſons, however, the ſame tragedy is re-acted, ſooner or later, and every ſucceeding fit renders the patient weaker and leſs able to ſupport freſh attacks.

*Irregular fits* of the gout do not terminate in the antecedent manner, but ravage in the conſtitution a much longer period, ſeize on various other parts beſide the feet, as the hands, elbows, knees, ancles, hip, loins, &c., &c.; nor is the patient ſo long free from the paroxyſm, but is always in jeopardy of its returning, without being always able to account for the cauſe, except knowing the diſeaſe is in the conſtitution from former fits.

The third ſpecies is called an *atonic* gout. This ſometimes may afflict patients a long time before they know that any ſuch diſorder exiſts in the habit. It happens in delicate conſtitutions, whoſe moving powers are not ſufficiently ſtrong to produce a fit of the Gout, or repel the latent enemy to the feet; for it cannot be aſſerted patients have

have the Gout until a fit regular or irregular has unequivocally demonſtrated the diſeaſe.

The ſymptoms mentioned as previous to the fit of the Gout may give ſome ſuſpicion of the diſorder; but the weakneſs of the habit may be incapable of producing a fit. This may be conſidered one ſpecies of the *atonic Gout*, but not always diſcoverable.

The moſt common ſpecies of the *atonic Gout* happens in a ſtate of the body which follows many and repeated ſevere fits of that mercileſs diſorder: the whole body is greatly debilitated; the mind nervous and irritable; the natural, vital, and animal functions all more or leſs affected; the digeſtion and chylification perverted from diſeaſed viſcera; the ſtomanch and inteſtines, in a manner, loſe their functions; the ſecretions and excretions are impeded; the circulation, reſpiration, and muſcular powers, enfeebled; with cough, difficulty of breathing, cramps, fainting, intermitting pulſe; chalkſtones, or ulcers about the toes, difficult and tedious of cure; the

nervous

nervous and ſenſitive powers are extremely irritated, or rendered torpid; in the former, extreme mental miſery; in the latter, dullneſs, loſs of memory, drowſineſs, lethargy, and all the forerunners of convulſions, apoplexy, palſy, or death.

To the ſymptoms already repreſented might be added a thouſand more; for every part and every function of the human body may be more or leſs affected; and it is often impoſſible to foreſee, by preſent ſymptoms, future conſequences.

To the former ſpecies may be added what has been nominated *athritis vaga*, or the vague or flying gout, which now attacks one part, then another, and this inſtantaneouſly; as from the ſtomach to the head, lungs, diaphragm, feet, hands, loins, hips, kidneys, bladder; ſhifting from one part to another with great rapidity. Nothing but the modern knowledge of the univerſal connection of the *tela celluloſa*, by means of its cellular ſtructure, and its importance in the human body, can account for the ſudden tranſition of the gouty particles from one part to another; but a phyſiolo-

gical comprehenſion of this conſtituent part of the human frame ſolves many difficulties unknown to our anceſtors, and to all who have not deeply ſtudied modern phyſiology and pneumatics. Neither the cauſes nor dreadful effects of the gout are ſo obſcure as many have imagined; though the cure at preſent may be ſurrounded with many, and ſome inſuperable, difficulties.

## *Cauſes of the Gout.*

The remote or prediſpoſing cauſes of the gout are:

I. Hereditary diſeaſe.

II. High living and over exerciſe, ſucceeded by inactivity. The gout attacks chiefly thoſe who freely drink wine, cyder, punch, &c.; eat much animal food: it is ſeldom found amongſt the poor, or drinkers of malt liquor.

III. Overbundance of wine and venery. Bacchus *pater*, Venus *mater*, ira obſtetrix *arthritidis*.

IV. Violent or accuſtomed exerciſes relinquiſhed, as hunting, ſhooting, walking, &c. &c.

V. The

v. The neglect of proper or accuſtomed evacuations; impeded perſpiration and coſtiveneſs contribute much to the gout, and preſerve it in the conſtitution.

vi. Mental inquietude cauſing an ill digeſtion in the ſtomach, from which a vitiated chyle, and of courſe a depraved and acrimonious ſtate of the blood.

vii. Frequent colds in the extremities, particularly in the hands and feet. The omiſſion of warm cloathing, agreeably to to the changes of the weather, eſpecially in ſpring, autumn, or winter.

The more *immediate* cauſes of the Gout are:

i. Cold air in ſpring, autumn, or winter, cloſing the pores of the ſkin, particularly of the legs and feet.

ii. A redundance of calcareous particles and coagulable lymph circulating in the blood, obſtructing or tardily paſſing through the minute cells or capillary veſſels.

iii. An increaſe of the arterial ſyſtem, to force on the morbid gouty blood, too tardily circulating in the minute veſſels, or aërial particles

particles partially obſtructed in the minuteſt cellular ſtructure of the *tela celluloſa*.

IV. Diſtenſions of the minute veſſels, or a depoſition of the morbid particles of the blood, in the minute cells of the *tela celluloſa* cauſing inflammation, pain, and tumor.

V. The incapacity of the diſtended minute venal ſyſtem in conveying back the depraved blood, *in tempore*, brought by the arteries. Hence local inflammation, pain, and ſwellings.

VI. The lymphatics and minute veins being deprived of their full natural power of abſorption, or reconveyance of the fluids brought into the minute cells of the *tela celluloſa*, the diſtentions and ſwellings increaſe; nerves ſuffer unuſual ſtretching, or are irritated by the acrimony of the fluids, a violent, acute ſenſation of pain is the conſequence. Theſe cauſes, both remote and more immediate, will be comprehended by thoſe who well underſtand anatomy and phyſiology, who have ſeriouſly conſidered the importance of the *tela cellul ſa* in the whole ſtructure of the human body,

as well as the offices of the arteries, veins, lymphatics, nerves, muſcles, &c. &c.

That cold weather cloſing up the pores of the ſkin is an exciting cauſe of the gout, the ſeaſons of the year, in which it is moſt common, fully ſhew; that a ſuperabundance of gluten, is a conſequence of cold; blood drawn from pleuritic and rheumatic patients, demonſtrates. That the offending particles in a fit of the gout, are calcareous and coagulable lymph, is clearly evinced by the following facts:

I. Blood taken from gouty patients has generally a ſuperabundance of gelatinous lymph *, even though the red particles, which is generally the caſe, cohere leſs than in ſound health. During, or even in the intervals of, the fit, blood drawn from arthritics, in different degrees, have this appearance.

II. In ſome, the calcareous or earthy particles are evidently mixed with the buffy appearance, called the inflammatory cruſt, on the ſurface of the blood, eſpecially if the

* I have uſed the terms gluten, gelatinous, and coagulable lymph promiſcuouſly.

blood iſſues from a large orifice in a full ſtream, and the perſon has been many years afflicted with the gout.

III. The matter diſtending the diſeaſed parts, cauſing the pain in gouts of many years continuance; if extravaſated under the ſkin, forms, what are called chalk ſtones; with theſe ſome perſons can write as with chalk.

IV. If the offending matter ſhould form itſelf into an abſceſs, and break through the ſkin about the toes or feet, the diſcharge is evidently compoſed of calcareous particles, united with mucus or coagulable lymph. A great quantity of ſuch particles from many gouty ſubjects, I have in my poſſeſſion, which evidently proves the fact.

V. If this matter be preſerved, it ſoon hardens in the atmoſpheric air, forming a calculus or ſtony ſubſtance ſimilar in its conſtituent particles to ſtony concretions in the urinary bladder, gall bladder, &c. though not poſſeſſing equal coherence *.

VI. The

* I have a collection of theſe particles; ſome in a ſtate nearly approaching to powder, or eaſily reducible to pow-

 der;

VI. The perſpirable matter paſſing through the pores of the ſkin and hands of ſome gouty perſons very long afflicted, after the more volatile parts of the perſpiration fly off in vapour, the earthy parts precipitate, and appear on the ſurface like powdered chalk; if ſuch arthritics lay their hands upon a table, when in a ſtate of perſpiration, a ſketch of the hand, as though drawn with white chalk, remains depicted. The ſame powder may be often ſcraped off the ſurface of the ſkin in conſiderable quantities.

VII. Similar calcareous particles iſſue through the arterial pores of the ſkin in different parts of the body, with the perſpirable fluid; but this circumſtance is only particular to thoſe gouty habits who have been very long afflicted with the diſeaſe, and whoſe whole maſs of blood ſeems much contaminated with earthy particles *.

VIII. Whilſt

der; others cohere more firmly, and of courſe are harder and denſer, having a greater portion of gluten.

* The inſenſible perſpiration is always paſſing through the minute arteries that terminate in the ſkin, and in all internal

VIII. Whilſt inſenſible and ſenſible perſpiration in the warm or mild ſeaſons of the year paſs through the external arterial pores of the ſkin, freely, by the actions of the arteries, the fit of the gout, in general, is dormant; but when this perſpirable matter or vaporous exhalations meet oppoſition in their paſſage through the external arterial pores, either from cold or through a diminiſhed force in the heart and arteries, from the veſſels being overloaded, from debility in the circulating powers, or any accidental frigefacting or chilling cauſe; then ſtomach complaints, anxiety, nauſea, ſhiverings, laſſitude, mental torpidity, or irritation, and all the approaching ſymptoms of the gouty fit, commence, and a painful, long, or ſhort fit of the gout ſucceeds, in proportion to the quantity of accumulated gouty matter, which may at the time circulate in the blood or ravage in the conſtitution *.

IX. The

internal ſurfaces, in the form of a vapour: if the perſpiration be increaſed, and appears in drops, it is called *ſweat*.

* It has been clearly proved, by the evidence of the ſenſes, that even the calcareous or chalky particles are exhaled

IX. The calcareous matter, after the febrile exacerbation or gouty heat, iſſues in great abundance, frequently with the urine, white, browniſh, or pink coloured, at different times during the fits of the gout, and, in proportion to its quantity, proportionably mitigates the ſymptoms.—This is another corroborating proof, that calcareous matter in too great an abundance is a principal cauſe, or conſtantly an attendant of the gout; becauſe its copious diſcharge alleviates the diſorder, and unburthens the conſtitution of the apparent cauſe of its moſt diſtreſſing and painful ſymptoms*.

X. In

exhaled and paſs through the pores of the ſkin of many gouty patients in the form of air or vapour, which, when chilled or condenſed by the atmoſpheric air, are proved to be earthy particles; and in all perſpirable fluid there are terrene particles.

* Similar particles are depoſited in fits of the gravel, and there ſeems a great affinity in the cauſes of the gout and gravel; the matter which is diſcharged in the latter might, if retained in the blood, produce the gout, or *vice verſa*, which experience has obſerved. In one inſtance of an elderly gentleman I attended many years ago, who was ſeverely afflicted with a moſt inveterate gout, many large calcareous concretions, not gall ſtones, were evacuated with his excrement during the paroxyſm. Theſe ſtony ſubſtances

x. In the diſſections of gouty feet, the calcareous depoſitions, or what are nominated chalk ſtones, are frequently diſcovered about the joints of the toes, and the ſame are found in the fingers. Theſe particles, thus extravaſated, may be called the effects rather than the cauſes of the gout, by ſome; but it ſhould be obſerved, that no ſuch effects are diſcoverable in the feet or hands of perſons *not gouty*, nor can ſuch a depoſition be found in any limbs, but in thoſe where the calcareous particles pre-exiſted in the habit; nor in any who have not ſuffered repeated and ſevere fits of the gout: therefore, though the effects may appear in the extremities, yet the cauſes of thoſe effects were previouſly in the conſtitution.

ſtances I have preſerved. Phyſicians, who know the connection between the internal ſurface of inteſtines and external pores of the ſkin, will eaſily perceive that the extreme openings of minute arteries on theſe ſurfaces convey and evacuate frequently noxious or irritating particles from the conſtitution; on the ſurface of the ſkin the mouths of the arteries convey chalky particles, which become powder in the open air: the ſurface of the inteſtines have ſimilar openings, called exhalent arteries. Colds and fevers are frequently ſolved either by perſpiration or critical purgings; gout by the evacuation of calcareous matter.

xi. From

XI. From all these facts it appears that a superabundance of *coagulable lymph*, or mucus united with calcareous or earthy particles, circulating in the blood, are present in fits of the gout. It should be remarked, however, that in the recent gout, or first gouty paroxysms, the calcareous particles are small in proportion to the superabundance of coagulable lymph *; whereas, when the disorder has ravaged many years, the earthy or calcareous particles predominate in various degrees; which accounts for the absence of chalk stones in recent, and the appearance of them after a great number of years affliction in this painful disorder. From which circumstances, it seems a very probable and just conclusion, that the calcareous gouty particles, already in the body, gradually attract those of their own nature, and after the seeds of the gout are sown, or created in the habit, unless the patient thoroughly change his usual diet; year after year the calcareous particles in-

* In rheumatic blood the buffy appearance of the blood is evident from bleeding, and this is perceived in fits of the rheumatism, and in the intervals, though, perhaps, in the latter, in a less degree.

crease

creaſe and the ſymptoms are more and more grievous; the body becomes debilitated, and leſs able to reſiſt the cruel enemy, until at laſt, worn down by repeated painful paroxyſms, anxious watchings, and mental perturbations, the irritating gouty matter attacks ſome natural, animal, or vital function, fixing on ſome noble and important part, inſtead of the extremities, which is called *miſplaced gout*, and ends in the fatal diſſolution of the afflicted patient *.

Why have gouty perſons a ſuperabundance of earthy or calcareous particles and gelatinous lymph in their blood?

The ſolution of this queſtion is replete with difficulty, but the diſcuſſion ſhall be attempted. Excluſive of a free animal diet, vinous and ſpirituous drinks, which cer-

* The parts on which the gouty matter fixes to prove fatal are the membranes of the brain; hence apoplexy — the diaphragm or lungs; hence difficulty of breathing and ſuffocation — the ſtomach; hence vomitings, ſyncope, death.

tainly are productive of the gout, perhaps by exciting heat and over vascular action, out of one hundred arthritic patients, ninety will be found subject either to costiveness from a *deficiency of bile*, or a dry skin.—From these sources may be discovered the origin of a superabundance of calcareous or earthy particles in the blood.

In order to explain how costiveness, or a dry skin, may generate a redundance of earthy particles in the blood, it will be necessary to direct the mind to consider the changes of food in the intestines, and follow its conversion into chyle; from hence to sanguification, or the mixture of nutritious particles of our food with the blood, and the separation of the grosser parts of aliment, their conversion into excrement, and their timely evacuation.

11. To discover the causes of a dry skin, and what particles are, and how retained by the arterial openings externally, or pores of the skin, not being sufficiently pervious to perform salutary perspiration.

These subjects are intended to be treated in a clear manner, though it may happen,

that none but the learned in the profeſſion, or philoſophical inquirers, will be able to comprehend the validity of the arguments produced. A previous knowledge of anatomy, phyſiology, and pathology, being neceſſary for the purpoſe; excluſive of long experience and juſt obſervations in the practice of medicine.

Several cauſes, after digeſtion is performed in the ſtomach, appear capable of retarding the timely and daily deſcent of the groſſer parts of the aliment, or excrement through the inteſtines, and of rendering them *clay coloured* *.

The

* 1. The *deficiency of bile* in the duodenum, or firſt inteſtine, where chylification is principally performed.

II. If there be no deficiency of bile, yet the *bile may be vitiated*, *inert*, and incapable of performing its intended purpoſes, from diſeaſed liver, from retention of the bile in the gall bladder, or from its undue paſſage to the duodenum.

III. The dryneſs of the internal ſurfaces of the inteſtines, ariſing partly from the exhaling arteries being impervious, partially obſtructed, or their active vibrating powers may be diminiſhed; the ſerous fluid, that ſhould paſs freely *in halitu*, or form of breathing vapour, is impeded or retained; hence dryneſs of the inteſtines and hardened excrements. The aſtringency of red wine, or contractile power of ſpirits, may here act as cauſes.

The cauſes of a dry ſkin, or a want of inſenſible

IV. A diminiſhed ſecretion of pancreatic juice may contribute to dry inteſtines.

V. An impeded ſecretion of the mucal glands, which are innumerable all through the internal ſurface of the inteſtines, or the inſpiſſation of the mucus, if ſecreted, may cauſe dry inteſtines, hardened feces, and retard their paſſage. The mucus being inſpiſſated, and adhering cloſe to the villous coat of the inteſtines, may diminiſh nervous inſenſibility, ſo that the excrementitious particles may not act as a ſtimulus in promoting the deſcent of the feces, or increaſing the periſtaltic motion; diminiſhed action in the muſcular fibres compoſing part of the inteſtinal coats, or diminiſhed ſenſibility, or want of a due irritability in the nervous powers in the inteſtines, may retain the excrements by diminiſhing their periſtaltic motion.

VII. Spaſmodic contractions in any part of the inteſtinal canal may likewiſe act as an impediment, and mould the excrement much ſmaller than its natural ſize; which circumſtance is often ſeen by phyſicians who will view the excrement. The ſame may happen from tumours in the meſenteric glands, or other parts compriſing the inteſtinal canal.

VIII. *Much application to ſtudy* will not only injure digeſtion, but all other functions neceſſary for health, and in ſome meaſure creates coſtiveneſs.

IX. A partial or an univerſal paralytic affection of the muſcular coats of the inteſtines will partially or entirely deſtroy their periſtaltic motion, and prevent the deſcent or evacuation of excrements.

X. *Pathemata animi*, or paſſions of the mind, but particularly thoſe of vexation, envy, malice, deſpondency, deſpair, all may injure and retard the due performance of the natural functions.

inſenſible or ſenſible perſpiration may be the following * :

More

functions. Perſons feel the probability of having a laxative watry motion ; ſome delicacy, company, or cauſe, prevents the evacuation, and for a time it is neglected. Hours after a motion is procured, but it is often coſtive ; therefore it ſeems probable the ſerum that would have been diſcharged is abſorbed, and carried into the thoracic duct, and thence to the blood.

XI. Improper foods and drinks long continued, aſtringent wines, ſpirits, &c., may ſo injure the ſtomach and inteſtines as to diminiſh greatly their digeſtive, chylifactive, periſtaltic, and excretory powers.

XII. Indolence, or want of due exerciſes, or the incapability of walking, riding, &c., may give riſe to coſtiveneſs.

* I. The neglect of warm, comfortable cloathing in the cold ſeaſons that require it.

II. Cold air itſelf checking or obſtructing the perſpirable matter in its paſſage through the ſkin will immediately cauſe an increaſe of the glutinous parts of the blood, ſhiverings, heat, &c. ; in many inſtances, as in pleuriſy, true inflammatory fevers, &c., in which *buffy blood*.

III. A debility in the arterial powers to reſiſt the external air, or their inability to force the perſpirable matter through the ſkin, which they actually do in health by their pulſating powers. If the pulſating powers diminiſh, the perſpirable evacuation muſt be diminiſhed, and the moiſt vapour, that ſhould, does not paſs.

IV. The dryneſs, hardneſs, or imperviouſneſs of the external ſkin, called *cuticula* ; in which caſe, though the arteries act, the perſpirable fluid, which ſhould be diſcharged,

is

More cauſes of coſtiveneſs and a dry ſkin might be adduced, but the foregoing facts are ſufficient. It only remains to give probable reaſons, why conſtipation and a dry ſkin are productive of gouty calcareous particles in gouty conſtitutions?

It muſt be firſt remarked, that ſuch particles already exiſt in all perſons, who have had the gout; whether created by any of the cauſes formerly enumerated, or whether the gout be hereditary; chemical attractions explain much on this ſubject.—*Simile ſimili gaudet*, and ſimilar particles attract ſimilar, oleous oily, watry water, &c. &c.

In the moſt vigorous health the perſpirable matter cantains ſome *terrene particles*, notwithſtanding it ſeems to iſſue from the

is impeded in its paſſage, and comes no farther than the *rete mucoſum*, and, inſtead of being conveyed through the pores, is re-abſorbed, and carried back into the conſtitution. A greater diſcharge of urine may ſometimes, in a great meaſure, obviate this; but in many debilitated gouty patients the kidnies do not perform their functions: little or no relief may be expected, in ſuch inſtances, from this quarter; from whence follow dropſies, ſwelled legs, pitting on preſſure, forerunners of a ſlow but certain death in advanced age, unleſs cured in the commencement.

body

body in the form of a vapour, or as fine and ſubtile as air, but air itſelf has terrene particles, and from the moſt limpid water likewiſe they can be ſeparated. For though air and water ſeem homogeneous fluids, yet they are compounded of various and contradictory parts, as many modern experiments fully prove.

All our foods and drinks contain earthy particles in abundance; animal more than vegetable.

*Chyle*, from which we receive all our nouriſhment, is the fluid part of our aliment, after digeſtion is performed in the ſtomach: it contains earthy particles, which may be eaſily ſeparated by chymical analyſis.

In the groſſer parts of our aliment, deſtined to be evacuated, are abundance of earthy particles.

The whole internal ſurface of the inteſtinal canal is furniſhed with abſorbent lacteals; in the ſmall inteſtines they are moſt, in the large leaſt numerous.

For obtaining a ſalubrious chyle, a proper mixture of the bile and pancreatic juice,

not

not of a vitiated quality or deficient in quantity, is neceſſary in the *duodenum*, or firſt inteſtine.

If the *bile* be diminiſhed in *quantity* or *vitiated* in *quality*, a ſalubrious chyle cannot be produced, but a depraved, crude chyle is a rational conſequence.

For the offices of the bile, which numerous experiments confirm, are to neutralize acidity, to mix the oily with the watry or ſerous parts, and, in ſhort, to reduce all viſcidity and tenacity of the chyle into a proper degree of fluidity, and to render it fit for abſorption to the lacteals.

The laſt offices of the bile are to ſtimulate the nervous coats of the inteſtines, increaſe their periſtaltic motion, and aſſiſt in forcing the groſſer parts through the large inteſtines, and urge their evacuation.

If the *bile be deficient* in quantity, or vitiated in quality, all or part of theſe offices are interrupted, a crude chyle is the conſequence; for the acetous ſtate of the chyle is not corrected, its tenacity is not attenuated, nor are the oleous particles mixed with the aqueous, nor are the inteſtines

properly

properly ſtimulated, no bile in the excrements appear, for they are *clay coloured* and *earthy*, *dry*, and often in *lumps* or *powdery*.

In ſuch crude chyle, there remain, perhaps, much more terrene matter and gluten than would exiſt if the bile and pancreatic juice performed their deſtined offices.

Such crude ill prepared chyle, containing a greater quantity of glutinous or terrene parts, being abſorbed and conveyed into the blood, an accumulation and ſuperabundance of earthy particles are the conſequence.

Coſtiveneſs is another probable cauſe why more earthy particles are abſorbed by the lacteals, than where the inteſtines perform their office freely in the deſcent and evacuation of the feces. For the groſſer parts of the aliments or excrements being retained, as they ſlowly paſs the inteſtines, *groſs terrene particles*, may be abſorbed in the larger inteſtines, and carried to the blood through the *thoracic duct*. The excrementitious parts, no doubt, ſuffer mutations in their long and tedious paſſage, if the body be coſtive, and theſe mutations

may ſend off fluid parts in an aërial, volatile, or other form; but, then, in a *vitiated ſtate*, and if theſe be received by the lacteals, the whole blood in a length of time becomes vitiated. The effect, however, appearing in a fit of gout may be very remote, and many years may elapſe before the patient perceives a diminution of health, or knows he has been nouriſhing the ſeeds of that horrid diſorder. Add to all theſe circumſtances the probable effects of exerciſes and inactivity. In the juvenile part of life, though irregularities be indulged by many of the affluent, yet exerciſes carry off the ſuperabounding humors; but at the time the gout generally appears, a diſinclination for juvenile purſuits has introduced indolence and inactivity; yet neither food nor wines are diminiſhed in quantity; plenitude and diſeaſes are the conſequences. Horſe exerciſe is often changed for the carriage, through inclination, lameneſs, or debility. Crudities and impediments in the natural functions are immediately cauſed and perceived; the gouty humors daily increaſe. Medicine ſhould, in this moment, exert her efforts to ſupply the deficiency

ency and curb the growing evil which ſuch changes in exerciſe produce. But medicine is cenſured becauſe it cannot force arthritics to alter their uſual mode of living, nor effect impoſſibilities, and the diſorder is ſuffered to ravage without controul. Every fit of the gout is a prelude to its ſucceſſor, and the arthritics are perſuaded to remain contented with the moſt miſerable gout, provided they be ſecure from the apoplexy, palſy, &c. &c.: for error, or artifice has aſſerted, that this moſt excruciating and painful of diſeaſes, is a *cure* for all others, and the unfortunate give credit to ſo palpable an impoſition.

The *dry ſkin*, as it plainly appears, is nothing more than a defect in the force of the mouths of the arteries, or a reſiſtance and obſtruction in the outer ſkin, called *cuticula*, which is often ſcaly and ſcurfy from ſimilar cauſes *.

If calcareous particles ſhould paſs through the pores, if they be reſiſted partially or totally, they muſt in part return into the

* Eruptions on the ſkin, of various ſorts, may be accounted for on ſimilar principles to the preſent.

habit and mix with the returning blood in the veins: for whether the abſorbing lymphatics or ſanguiferous veins carry back theſe terrene particles, the former to the *thoracic duct*, the latter to the *cava*, ſtill ultimately they muſt mix with the blood. If there be a greater abundance of theſe particles than can be circulated in the blood, or external cold prevents their partial evacuation through the pores of the ſkin, by urine, or from the inteſtinal ſurface, then diſtention of veſſels and partial obſtruction take place in the vaſcular or cellular ſtructure of membranes, in the extremities, where the circulation is moſt languid, the compreſſion of membranes moſt obvious, and the veſſels moſt minute *.

From theſe circumſtances, it is concluded, that coſtiveneſs and a dry ſkin, independant of free living and inactivity, are ſometimes productive of thoſe particles in the blood, which, when ſuperabundant, accompany a fit of the gout. Many fluids

* The ſhoes preſſing the ſoft parts of the foot and toes on the tendons and bones may impede the free circulation of blood in the minuteſt veſſels.

of

of different compoſition circulate, ſome groſſer, others in the form of air, or a fine ſubtile vapour in the cellulous ſtructure of the whole body; oleaginous, ſerous, and ſaline, gelatinous, and earthy, all unite to form a whole. It is rational to ſuppoſe many changes happen, and many ſenſations are produced by the mutations of aërial and other particles of the circulating fluids; though the exact cauſes or changes may not always be proved; for many things are beyond demonſtration; yet, reaſoning by induction often ſupplies its defect, and explores new fields in ſcience, from what has been already diſcovered.

The fit of the gout ſeems nothing more than a violent effort of the conſtitution to evacuate the diſtreſſing calcareous and gelatinous particles, and the whole art of medicine, in ſuch cauſes, ſhould be ſkilfully directed to ſecond theſe efforts by *ſhortening* the duration of the fit without *repelling* it, and to give *firmneſs* to the conſtitution, as occaſions may require, in the neceſſary expulſion of the enemy.

In the intervals, medicine ſhould attempt the

the prevention of frequent returns of the fit, by diet, remedies, and judicious management; but in theſe ſalutary intentions the art has frequently to contend with inveterate prejudices and impatience; ſuperficial reaſoners and obſtinate pertinacious vulgar errors; from which cauſes, perhaps, no diſorder incident to the human body is more unſkilfully treated, than the gout, though none be more calamitous to the ſufferers.

## Why the feet and great toes are generally firſt affected?

Having ſhewn that the offending particles of matter in the gout are more or leſs calcareous, united with a ſuperabundance of coagulable lymph, or combining mucus floating in the blood, it ſhall next be conſidered, why the feet or great toes, are, in general, primarily affected with thoſe painful ſymptoms and appearances, that diſtinguiſh the gout from all other diſorders. In the rheumatiſm, *muſcular parts* alone, between the joints are the ſeats of the diſorder;

der; in the gout, the *joints* and their ſurrounding parts are always affected.

The feet are compoſed externally of the two ſkins with the *rete mucoſum* between them and cellular ſubſtance, immediately under which are tendinous expanſions, numerous tendons of muſcles dedicated to the various motions of the joints of the feet and toes, ligaments which connect the joints, &c. &c.

In the ſtructure of all theſe parts, and particularly in the nervous and cellulous expanſions, are numerous minute blood veſſels. The more diſtant from the heart in the extremities, the minuter the veſſels, and weaker the action of arteries, particularly in advanced life, or old age.

In the feet and even hands, the circulation of the blood is more languid than in parts not ſo remote from the heart or in large arteries. Hence coldneſs in the hands and feet in winter, or old age, for arterial action preſerves heat.

The blood which paſſes through thouſands of theſe minute veſſels is of a ſerous nature, or its fineſt particles irrorate or tranſpire

tranſpire through the cellular texture as light as air; for the minuter the *veſſels* or *cellular ſtructures* are, ſo much more *ſubtile* muſt be *the fluids*, that paſs without impediment *. Almoſt the whole body is vaſcular and cellular, the muſcular fibres excepted; and they contain blood veſſels in their directions, which is fully demonſtrated by minute anatomical injections.—While the blood is in a pure ſtate without a ſuperabundance of gelatinous lymph and calcareous particles, the circulation of all the finer parts of the blood, whether ſerous or volatile, paſs freely through the arteries, capillaries, veins, cells, and external pores.

In ſuch healthful ſtate of the fluids and ſolids, the gelatinous lymph poured into the minute cells of the *tela celluloſa*, or on large

* It is eaſy to conceive that mutations and ſeparations happen to thoſe aërial particles that tranſude through the minuteſt cellular ſtructures in a ſtate of diſeaſe, and thoſe *changes*, both of condenſible and non-condenſible, or aërial fluids, may, by *acridity*, *ſtimulate the nerves*, *and impel the ſolids to increaſed action*; hence partial or univerſal heat, local inflammation, or fever, and various painful diſeaſes, according as the particles forming fluids may be more or leſs changed from their original and healthful ſtate.

ſurfaces,

ſurfaces, is abſorbed by that ſyſtem of veſſels ſtrictly called *abſorbing lymphatics*, which are different both from arteries and ſanguiferous veins. This is a modern diſcovery of greater importance when applied to practical medicine, than has been hitherto imagined. When the blood ſuperabounds with gelatinous or coagulable lymph and calcareous particles, probably from the abſorbing lymphatics not performing duly their functions, the regular circulation of the blood in the minute ſyſtem of blood veſſels, particularly in the capillary veins and excretory ducts or minute cellular ſtructure, may be impeded *.

A ſmall diſtention of theſe cells probably deſtroys the abſorbing powers of the inhal-

* 1. Becauſe the particles to be circulated have a greater degree of coherence than they naturally ſhould have; or may be larger than the diameters of thoſe very minute veſſels and excretory ducts in the ſkin; or the arterial pores may be cloſed, and reſiſt the exhaling fluids in their paſſage.

11. Becauſe the blood or fineſt fluids brought by the minuteſt arteries into the almoſt inviſible cells of the cellular membranes, will be depoſited in the cells, or impeded, in their paſſage.

ing ſanguiferous veins * and lymphatics; hence an accumulation and ſuperabundance of fluids in the cells, or diſtenſions of minute veſſels, and impediments in the circulation.

The heart conſtantly ſends forth blood by means of the arteries to every part of the body; when the arteries totally ceaſe to beat the venal blood firſt coagulates, and death is the conſequence.

But during life, the arteries, which become minuter and minuter as they approach the ends of the toes, receive their blood from the larger arteries, and the minuteſt arteries pulſate and force by pulſation the blood on to the ſanguiferous veins, as, likewiſe, the perſpirable particles through the pores of the ſkin. The tranſudation of fluids, ſo viſible on the ſurfaces of the thoracical or

* It is doubted by ſome moderns, whether any other ſyſtem of veſſels abſorb beſides the lymphatics: if they mean *coagulable lymph* only, it may be anſwered in the negative: if they mean the finer and more volatile aërial, as well as ſerous ſaline, particles of blood, it may be in the affirmative; for certainly the very minute ſanguiferous veins reject coagulable lymph, but attract and receive the other particles.

abdominal

abdominal viſcera, is performed by the pulſating powers of arteries *.

Though the veins be impeded, the arteries ſtill pulſate and force on the blood to wherever the impediment may happen to ariſe.

If theſe impediments happen in the toes or feet, the pulſating arteries with a quicker and more accellerated force, endeavour to remove the impeded circulation in the part; which if through debility, or any other cauſe they cannot effect, then the arteries force fluids, where there was already a ſuperabundance: hence local inflammation, pain, and ſwelling.

Inflammation or heat is nothing more than an increaſed motion in the arteries with an impeded or tardier circulation of the blood in the veins, and the redneſs is cauſed by a depoſition of *red particles* of blood in

* If a fine injection of the arterial ſyſtem well ſucceeds, theſe facts are demonſtrable in the *cutis* and villous ſurface of the inteſtines, and where the minute arteries are moſt numerous, as in the apex of the fingers, &c. In the cellular ſtructure that contains the adeps or fat, which, during life, is fluid, the arterial openings are evident in the cells; many preparations of which are ſeen amongſt anatomiſts.

the cellular ſtructure of the membranes, or other parts, not deſtined naturally, or in health to receive *red particles.*

From which it plainly appears, that the fit of the gout is nothing more than an inaptitude in the veins or cellular ſtructure to convey back again the fluids abounding with calcareous glutinous matter, forcibly brought to the feet by the arteries. The pores of the ſkin, which the moderns have fully proved to be the termination of minute arteries, probably, for the purpoſe of *exhaling noxious* or *ſuperfluous particles* out of the human body, &c., are commonly obſtructed. Theſe particles paſs in the form of a *fine vapour or moiſt air*, in health, continually; but, when impeded by cold external air or other accidental cauſes, a morbid change of all the fluids of the whole body is immediately produced, as inflammatory or intermittent fevers, pleuriſy, &c. fully evince.

In every conflict, from this cauſe, the parts affected in the gout receive injury, and after repeated fits, ſome of the cellular ſtructure, of which the whole body is compoſed,

compoſed, or capillary veins rupture, and pour forth their contents, and never after recover their original form or tone; the blood being in patients, long afflicted with the gout, of a calcareous nature; chalk ſtones about the heel, toes, or in different parts of the feet and hands appear.

How the gouty particles affect the nerves?

It will not be difficult to aſcertain why the nervous ſyſtem is ſo ſenſibly affected, previous to a fit of the gout; for from the ſame ſources, that produce the fit, ariſe all thoſe ſenſations of inappetency, flatulency, eructations, languor, or increaſed irritability of the mind, flying pains, cold ſhiverings, fluſhings, and a variety of unuſual feelings; in different parts of the body ſpaſms, apoplexy, palſy, aſthma, &c.

Here ſhall be conſidered the effects of the gouty particles floating in the blood on the nerves; but in this explanation a minuter inveſtigation may be neceſſary than this treatiſe permits *.

1. Ana-

* Whoſoever would wiſh to be more converſant with the cauſes of theſe ſymptoms, as they appear from anatomical and

I. Anatomy and phyſiology teach the nerves to be the organs that convey all our ſenſations to what is called the human mind, and the human mind by means of the brain and nerves can direct all voluntary motions.

II. That if the nervous ſyſtem, or any part of it ſuffer diſtenſion, or be irritated by any ſtimulating acrid, aërial, or other fluids, a ſenſation of pain or uneaſineſs is felt and conveyed to the mind; which latter ſeems to ſuffer more or leſs diſtreſs, according to the force, duration, or acuteneſs of the uneaſy ſenſation produced.

III. All the nerves are replete with minute blood veſſels, a medullary ſubſtance, an exceeding fine vaſcular membrane, through which the veſſels paſs. Fine anatomical injections, &c., fully demonſtrate theſe facts, ſome of which may be rationally applied to practical medicine.

and phyſiological facts, may peruſe the Treatiſe of Female, Nervous, Bilious, Hyſteric, and Hypochondriacal Diſorders, Madneſs, Suicide, Convulſions, Lethargy, Apoplexy, Palſy, &c., &c.; a new edition of which will ſoon appear.

IV. The

IV. The veſſels continuing with the nerves, circulate fine particles of blood or fluids.

V. The nerves are found moſt numerous in parts which have moſt ſenſibility.

VI. The veſſels are equally numerous in thoſe parts.

VII. If the blood be loaded with irritating particles, the veſſels that paſs through immediately with the medullary ſubſtance of the nerves, more or leſs, will abound with irritating particles.

VIII. The blood in gouty perſons is morbid and abounding with irritating particles.

IX. The irritating particles muſt therefore irritate, in proportion to their *quantity* or *acridity*, the nervous parts of gouty patients.

The ſtomach, the inteſtines, the diaphragm, the kidneys, and urinary bladder, the lungs, &c. are all parts liable to be irritated by acrid *ſtimuli*. — The morbid particles of the blood cauſing the gout acts as *ſtimuli*: hence all the uneaſy nervous ſenſations of gouty patients. This morbid diſtreſs of the nerves may act

on the moving ſolids, excite them to more violent action; hence various ſymptoms and ſenſations.

## *On the general Modes of treating the Gout; with Obſervations, the Reſult of long Experience, in various Caſes.*

In the *intervals* of the gouty paroxyſm, medicine has in different ages, preſcribed abundance of remedies and plans of diet, &c.

I. A milk and vegetable diet.

This, in ſome few inſtances, when the diſorder has been recent, and the viſcera ſound, has proved a cure, or kept the fits more diſtant and ſlighter; in other inſtances, a dropſy has been the conſequence, which has *cured* the gout, but *killed* the patient.

II. Abſtinence from wine, venery, and luxurious feeding.

Theſe judiciouſly applied will prove very beneficial.

III. Various

III. Various muſcular exerciſes *.

Theſe are certainly uſeful, if the patient be able to bear them without injury.

IV. Change of air.

If, with a proper diet, ſalutary; it may invigorate the habit ſo as to ſuſtain the fits with leſs injury.

V. Evacuants occaſionally, as emetics and purges, &c.

Theſe methods, in general, too rough and injurious.

VI. Antiphlogiſtics, as neutral ſalts, &c.

Few arthritics can bear antiphlogiſtics on their ſtomach.

Nitre, &c. except in very inflammatory caſes, and ſtrong habits, are dubitable or dangerous remedies.

VII. Tonics, as bark, chalybeates, &c.

Theſe are extremely uſeful to the debilitated in ſtrengthening the ſyſtem.

VIII. Stimulants, as muſtard, aromatics, &c.

In many caſes heating; but in cold, phlegmatic habits, uſeful.

* Lately by *Buzaglo*.

IX. Mercurials, and even ſalivation.

Mercurials as alterants, uſeful, joined with antimony; ſalivation in general injurious.

X. Antimonials.

Preparations of antimony are often of great utility, if they do not irritate; but in very delicate habits not to be preſcribed.

XI. Sulphurous preparations

Have prevented both gout and rheumatiſm from returning ſo often as uſual, nay, for many years.

XII. Bitter infuſions, powders, decoctions.

Bitters uſeful joined with ſteel in ſome caſes; in others injurious.

XIII. Lime water.

An excellent abſorber of acidity, and very uſeful to gouty and nervous patients abounding with wind and acidities in the ſtomach; particulary if it be joined with bitters and aromatics, or carminatives.

XIV. Mineral waters.

Tunbridge and Bath waters, by invigo-

rating the habit, have fixed the gout in the feet, and have been proper remedies in debilitated conſtitutions.

XV. Warm bathing

Should be cautiouſly uſed in cold weather but ſometimes very efficacious, eſpecially the baths introduced in this treatiſe.

XVI. Solution of *gum guiacum* in rum joined with nitre. This came from the Governor of Martinique as a wonderful ſpecific. It has not cured one perſon, as might have been foreſeen by experienced phyſicians. The *guiaicum* is very heating in many habits, particularly in the nervous and irritable, therefore this remedy is moſtly adapted to the cold and phlegmatic; though, in ſome meaſure, corrected by the *nitre*, which laſt ſalt few gouty ſtomachs can bear.

XVII. Numerous empirical projects, as *Le Fevre*'s powder, &c. &c.; the introduction and applauſe of which, *pro tempore*, while the *mania* laſted, have chiefly depended on the artifice of the projecting and daring adventurers, and the eaſy credulity of the unfortunate ſufferers, who,

though very ſenſible in other reſpects, have been often impoſed on by bold, artful adventurers.

It would be loſing time to little purpoſe to minutely examine all theſe propoſed and contradictary remedies for the gout; it is ſufficient to obſerve, that few, very few, gouty patients have experienced much relief, and as to a *radical cure*, I have ſeldom ſeen ſuch an happy event, after above thirty years full obſervation and extenſive practice in the art of medicine.

It may be affirmed, in general, that the diſorder is *often incurable*, the reaſon of which ſhall be more ſatisfactorily explained in a future part of this treatiſe.

In the gouty paroxyſm or fit, various are the modes or rather caprices of treatment, as:

1. The free uſe of ſtrong wines, cordials, and ſpirits, under the ſpecious pretext of keeping the gout out of the ſtomach; this, though applicable to ſome, very injurious to others.

11. External applications to the parts affected, as burning with *moxa*, &c.

Theſe are out of repute.

Fomentations

Relax; but in ſome caſes uſeful, in others hazardous.

Poultices of ſtrong beer grounds and oatmeal, are in diſuſe, as likewiſe many others; for they lay too heavy on parts inflamed, if there were no other objection.

Leeches,

Are ſeldom applied, and have not proved efficacious.

Bliſters,

Their repetition and ill ſucceſs have ſettled their reputation, though this application was the *mania* for a time.

Stinging with nettles,

Abſurd; becauſe there is not ſufficient inflammation in the diſorder, it muſt be augmented.

Ointments and liniments,

Injurious, and liable to *repel* the gouty flux.

Oils,

Oils, &c., &c., beſides an innumerable farrago of ſuperſtitious and contradictory applications, ſome heating, ſome cooling, and ſome of a middle nature, neither ſtimulating nor cooling.

III. The opinions of phyſicians are various; for ſome adviſe

An antiplogiſtic regimen,

Only applicable to the very robuſt.

Abſtinence,

Of uſe to great feeders.

Bleeding,

Rarely neceſſary, and frequently injurious, except in *dyſpnœa* and particular dangerous caſes.

Saline cooling remedies,

The gouty ſtomach will ſeldom bear.

Vomits and purges,

Too violent, except in particular caſes.

Others praiſe the utility of

Cordials.

To thoſe who have lived very free, uſeful;

uſeful; to others, unleſs diluted, too heating, except when the ſtomach be attacked.

Stimulants and tonics,

Frequently uſeful out of the fit.

Others recommend nothing but *patience* and *warm flannel*, and inſinuate that *Nature* is the beſt doctor for the gout.

This is the ſureſt method for prolonging the fit, confirming the diſeaſe, and producing more frequent fits hereafter.

Meat, half dreſſed, ſmall beer, and a cheerful intoxitating glaſs once a month, have been recommended.

Changing from free diet and wines to ſmall beer has produced dropſy or debility, and terminated fatally; therefore applicable to few gouty ſubjects.

On the whole of which it may be obſerved, that every plan of treatment hitherto ſuggeſted has failed, and muſt be irrational, if univerſally applied. Every *individual* almoſt requires a *particular treatment*: it is the province of phyſic to diſcover the peculiarities of each — the conſtitution,

ſtitution, nature of the fit, and a variety of other circumſtances, which rational medicine can alone comprehend, joined by long experience and unprejudiced obſervations; for although no *radical cure* may be effected in the generality of inſtances, yet patients may be rendered *ſafer* and more comfortable than if the diſorder be left to what is called Nature, or treated without diſcrimination.

## *On the Treatment of the Gout during the Fit, by the new-invented Gout Baths.*

A diſcovery was made about ten or eleven years ago, that the remedy which was uſed with ſuch extraordinary ſucceſs at Paris in the fit of the gout, was the *muriatic acid* diluted with warm water *.

The principal arguments in favour of this excellent remedy, are:

* This preparation had been uſed above twenty years before, and approved of by ſeveral regular phyſicians; at Paris the original inventor kept it a ſecret. I ſent for ſome through the praiſes it received from a gentleman of rank in London, whoſe veracity could be depended on, and who had been ſucceſsfully treated at Paris.

1. That

I. That the fit of the gout is much ſhortened.

II. That the patients have leſs pain than when otherwiſe treated.

III. That they recover the uſe of their limbs much ſooner after the fit, except in old and inveterate caſes.

IV. If credit may be given to the inventor, by uſing the baths ſpring and autumn, the gout may be long prevented, and in conſequence the fits rendered more diſtant.

V. That, while the fit of the gout be preſent, when treated in this new manner, the patient is generally more chearful, and has often better nights, than is otherwiſe obſerved.

VI. That the *criſis* of the gout ſooner happens, and the calcareous or earthy particles, that probably occaſion the fit, are, after a few bathings, evidently diſcharged; through the pores of the ſkin, or by the urine, if not in all, yet in many inſtances.

VII. Or if the cauſes of the fit be not removed by perſpiration, the earthy irritating particles by means of the acid are attracted to the legs and feet, and in many inſtances,

the calcareous particles and gluten may be obſerved on the legs and feet, after each bathing.

VIII. If the *head*, *ſtomach*, *lungs*, *pleura*, or any internal part be affected, the bath is a prompt remedy to attract the gout to the feet, and thus the internal parts are liberated from imminent danger.

Theſe were the general doctrines promulgated by the original inventor, and experience proves, in general, they are well worthy of attention.

## *Of the Compoſition of the Gout Baths.*

The component parts of the baths are, the *muriatic acid*, and warm water, in certain proportions according to circumſtances.

That the liquid, which is called *elixir* by the inventor, and ſold at a guinea, or a *Louis d'or*, a ſmall bottle, is nothing elſe than the *muriatic acid*, the following experiments fully prove *:

It

* EXPERIMENT THE FIRST.

Some ſilver being diſſolved in the *acidum nitroſum aquâ dilutum*,

It was ſome time after, I had tried the original *elixir*, as the author calls it, on various patients, that the analyſis was made; the price of the baths being too exorbitant for any except the wealthy.

It was obſerved, by repeated trials, that the French baths were too ſtrong, as they occaſioned ſmall veſications about

*dilutum*, ſome of the elixir, as it was called, was added, and the ſilver precipitated.

EXPERIMENT THE SECOND.

Pouring three parts of *oleum tartari per deliquum* on one of the elixir, a briſk effervescence enſued, and, on evaporating the liquid, the remaining maſs was diſcovered to be compoſed of much ſea ſalt.

EXPERIMENT THE THIRD.

In order to diſcover whether any nitrous acid was combined with the preparation, a piece of paper was imbibed thoroughly with the liquid, and dried; but, on being burnt, none of thoſe ſparkles, which appear from nitre, were perceived. This evidently proves the abſence of nitrous particles.

EXPERIMENT THE FOURTH.

Some *hydrargyrus purificatus* was diſſolved in *ſpiritus nitri acidus*, diluted; ſome of the elixir was added, and the *hydrargyrus purificatus* immediately precipitated.

Many other experiments, too tedious to inſert, as well as the ſmell of the liquid, all conſpired to prove it to be the *fuming muriatic acid of Glauber*.

the feet, which, however, proved of no ill consequence. The original bottle contained about five ounces of the *muriatic acid*, this was mixed with five, six, or eight quarts of warm water, and the patients feet were bathed, for an hour or an hour and half previous to laying down in bed: the feet are to be kept warm, and one hour after, the bathing is to be repeated for two hours, if possible; the same operation, according to the author's advice, is to be renewed.

## *Conjectures on the Manner of the Operation of the* Muriatic Acid Baths *in Fits of the Gout.*

It has been already remarked, that the causes of the gout are a superabundance of calcareous particles and gelatinous lymph, or gluten, circulating in the blood *.

To

* It is remarked in the Treatise on Female, Nervous Diseases, &c., if the blood be in a *buffy state*, it is not easily changed

To inveſtigate the action of the muriatic acid on the calcareous particles of the human body, recourſe may be had to facts, which are well known to all practical anatomiſts.

1. Calcareous particles, even of bones, are attracted by the muriatic acid, diluted with water in a ſtrength ſimilar to the baths.

changed either by repeated bleedings, abſtinence, ſaline remedies, &c.; for bleeding after bleeding ſtill ſhews the coriaceous cruſt, not always a ſign of true inflammation. What is the cauſe?

1. The nutritious particles compoſed of earth, gluten, &c., which ſhould reſtore the body, are impeded in their paſſage to the cellular ſtructures they were originally intended for, and to the places they are conveyed by the arteries in ſound health.

11. From this cauſe many particles of earth, gluten, &c., are retained in the blood of both arteries and veins: ſerum and ſaline particles only proceed to the minute cellular ſyſtem; hence acridity and irritation.

111. By every day's nutrition until the cauſes of impediment be removed, which are ſometimes very tedious, as in the chronic rheumatiſm, &c., freſh particles are attracted by thoſe already circulating with the blood; earthy particles attract earthy, gluten glutinous; hence thoſe accumulations of calcareous and gelatinous particles in the blood ſo obvious in gout, rheumatiſm, &c. The difficulty of their removal will not be difficult to diſcover from a true comprehenſion of theſe cauſes.

11. Such

11. Such a weak diluted liquor will have no effect on the ſofter parts, veſſels, or viſcera; for theſe require *two thirds* muriatic acid, and *one third* water, to remove the veſſels, &c., in anatomical preparations, injected with coloured wax, &c.

The concluſions are evident. Calcareous particles, ſuch as cauſe the fit of the gout, are attracted by as weak a liquid as compoſes the *gout baths*, or nearly ſo, without injury to the ſkin or ſoft parts.

It has been aſſerted, that an earthy white powder is ſometimes perſpired through the pores of the ſkin of gouty perſons, ſo as even to mark a table white, as though chalked. The ſame, likewiſe, may be ſeen by means of a microſcope. — The particles are ſimilar to the oſſeous or calcareous hard parts of bones, and are attracted, or changed by ſimilar *menſtruums*.

The impediments in perſpiration are the frequent cauſes of fits of the gout: the pores of the ſkin ſeem clogged up by calcareous or glutinous particles; or they paſs through the pores with difficulty, or accumulate

cumulate on the ſurface under the outer ſkin.

Whether the acid of the gout bath, during bathing, attracts the gouty matter, and draws it through the arterial pores, or whether by the mere operation of opening the pores of the ſkin the gouty cauſe, which obſtructed thoſe pores, be liberated and evacuated, I cannot at preſent poſitively determine; but an opinion ſhall be delivered: perhaps future experiments and reaſonings may more ſatisfactorily elucidate this ſubject, and ſhew that *the nitrous acid diluted is ſuperior to the muriatic* *.

The

* To draw inferences from ſome obſervations and facts, it may be ſuppoſed that the acid of the bath attracts, in a certain degree, or diſſolves the earthy particles in the feet; ſo that they paſs through the pores, and thus liberates the conſtitution from the cauſe of the morbid local diſtreſs.

*Firſt*, Becauſe the patient ſoon ſeems unloaded of the preſſing cauſes of the gouty fit, and becauſe the ſame ſtrength of acid attracts calcareous particles, without in the leaſt injuring or affecting the ſofter parts.

*Secondly*, Becauſe, on examining the limbs of perſons much afflicted with the gout, immediately after bathing, a matter often may be ſcraped off, which appears like earthy particles attracted, and in ſome meaſure changed, by the acid; and thoſe who are moſt afflicted with the gout, and

are

The gouty baths probably, then operate by

1. Opening the pores of the ſkin, and by attracting the gouty particles from the arterial openings through the ſkin.

11. By invigorating the circulation of the blood in the extremities, particularly in the returning veins, after the minute arterial ſyſtem of external openings are unloaded, and obſtructed perſpiration is removed.

111. By attracting and drawing down an abundance of gouty earthy particles to the feet, where they ſhould be naturally depoſited in regular gouty fits.

are ſubject to a dry ſkin, have this attraction of gouty matter through the pores in the greateſt quantity.

Theſe particles coming through the pores, if dried, have the appearance of calcareous matter united with gluten, and adhere together. In ſome inſtances a great quantity of this matter may be ſcraped off, by means of a wooden ſpatula, from the ſkin. It, therefore, appears that the acid liquor diſſolves or attracts the gouty matter, without injuring the ſkin or ſofter parts of the body.

In other inſtances a leſs quantity of gouty matter ſeems attracted or changed; the calcareous particles of ſome may be diſſolved in the liquor, perhaps in others not.

IV. By increaſing inſenſible perſpiration, and removing the cauſes of viſcid blood, mentioned in page 53, without relaxation; for the *muriatic acid* is known, internally taken, to be an excellent antiſeptic, or reſiſter of putridity *.

There is a conſiderable difference between baths of merely warm water, or ſweating the feet by bootikens, &c., and baths compoſed of the *muriatic acid*, &c.

The former modes often create great debility and lameneſs in the feet, for a long time after the gouty fit: whereas the latter ſeldom leave any ſuch relaxation; unleſs in thoſe, who were old and extremely weak before, and who had ſuffered the gout many years with frequent returns of

* I have read in ſome chymical author, I think it was in *Collectanea Leydeniana*, that the muriatic acid was given internally in a decoction of ſome bitter infuſion, properly diluted, as an excellent remedy for the gout. It has been uſed near two centuries, diluted with water, as a cooling acid drink in fevers. If any remedy could be invented to prevent the mentioned cauſes of the gout, the cure would be complete, if timely applied.

violent paroxyſms, and who experience the ſame, whether they bathe or not †.

When the gout is left to make its baneful ravages under patience and warm flannel, with the addition of cordials and ſtrong wines, or by whatever mode the gout may be treated; great debility is frequently the conſequence; but in the management by the baths, the pain is leſs, the criſis of the gout is haſtened, and often in a week or two is performed, what is not procurable, otherwiſe, in a much longer time, and leſs weakneſs and lameneſs ſucceed to the fit.

† In ſuch, nothing leſs than a regeneration of the injured or deſtroyed parts, and the return of the priſtine vigour of the body, which is more to be wiſhed than rationally expected, can reſtore the patient. It is not eaſy to determine what relieves ſuch perſons during the paroxyſm: ſometimes no remedies ſeem to avail even in alleviating the painful diſorder; at other times they imagine benefit has been obtained by ſome trifling inefficacious remedy or application; and whatever was adminiſtered at the time eaſe was procured, that is praiſed, and ſuppoſed to have given the relief, when perhaps the fit was naturally terminating. Such concluſions, however, have, at times, introduced many abſurd remedies for the gout, ſuch as charms, amulets, rolled brimſtone put in the bed, &c. &c.

## *On the Times of uſing the acid Gout Baths, and Method of preparing them.*

The times for uſing the gout baths are daily, during the fits, for about eight or ten days, more or leſs, as circumſtances, conſtitutions, and caſes require.

I. In thoſe patients, who had but few and ſlight attacks, the pain and miſery, as likewiſe the paroxyſm, are ſoon removed by the baths.

II. Thoſe, who are aged, who have laboured under the gout many years, have lived free, and have had a great number of fits, ſhould bathe longer than the former. It cannot be expected, that an inveterate gout will ſo ſoon yield to any treatment as the recent.

III. Thoſe, who have chalk ſtones, whoſe bodies are emaciated, or greatly debilitated by painful watchings, loſs of appetite, indigeſtions, and who labour under a general *atonia* of the body, ſhould not uſe the baths; not becauſe the bath would injure ſuch perſons, but the expected relief is not pro-

curable either by this, or any means. If ſuch patients do not obtain benefit, which is often unreaſonable to expect, the laſt remedy uſed, is often accuſed of injuring them, eſpecially if it be a new application or medicine *.

IV. If the gout attack the head, cauſing great pain or delirium, lethargy or the apprehenſion of apoplexy; or if the ſtomach, or any part of the cheſt be attacked, cauſing pungent pain, laborious or difficult breathing; the baths, if timely and judiciouſly applied, will often be uſeful. In theſe deſperate caſes, death, ſometimes ſuddenly, and at other times more ſlowly, is the conſequence. In ſuch dreadful inſtances, therefore, it is humane to attempt relief even from a doubtful remedy; for what is not doubtful under ſuch dangerous circumſtances, than to ſuffer the patients to die without any attempt to remove the cauſes †?

The

* It ſhall be conſidered how ſuch afflicted patients ſhould be judiciouſly treated in the latter part of this performance.

† The improved manner of preparing the baths is the following:—A glazed upright pan muſt be procured, of the brown

The bathing is to be continued longer or ſhorter, according to the following circumſtances:

1. If the pulſe become quicker, which may be eaſily aſcertained by a ſeconds watch, an univerſal or partial perſpiration may be expected, and while this be moderate, it ſhould be encouraged, during the whole time of bathing.

11. If the inſenſible perſpiration ſhould be augmented, and, if what be called *ſu-*

brown earthen ware made at Chelſea, the ſame that crucibles are compoſed of; the circumference ſhould not be much larger than to contain the feet and legs; the form ſhould be an oval. Three or four gallons of warm water ſhould be put into this pan, and an earthen pipkin, of the brown ſtone ware, ſhould be ready to add freſh warmed liquor as that in the pan becomes cool. Metallic veſſels are improper.

To every gallon of warm water may be added ſix drachms or an ounce of the muriatic acid.

The water and the ſpirit ſhould be well united by ſtirring the compoſition with a ſtick.

The feet and legs are then to be placed in the bath, in ſuch a comfortable warmth that the patient can eaſily bear the heat, from 90 to 96 degrees, according to conſtitutions.

The thighs and top of the pan are then to be covered with a large piece of double flannel, to keep the parts warm, as well as to preſerve the heat of the foot bath.

*dor*,

*dor*, or ſweat, ſhould iſſue in larger or ſmaller drops on the ſurface of the ſkin, particularly on the face, then the feet are to be taken out; for though a gentle perſpiration will be certainly beneficial, yet profuſe ſweat will leave the patient more relaxed than would be prudent by this, or any other treatment.

It is moſt rational to proceed according to circumſtances, and to permit patients to bathe a ſhorter or longer time in proportion as the diſorder be very inflammatory, or ſlightly ſo, and as the body may be vigorous, or delicate, nervous, irritable, or greatly debilitated.

The time and repetition of bathing, likewiſe, ſhould be different in different caſes and conſtitutions; the original inventor recommends bathing morning and evening, repeatedly, and in ſome inſtances, this method may be very efficacious, but in others not. In the true inflammatory gout of robuſt conſtitutions, the bathing ſhould be repeated twice in the day, by which the fit will ſooner terminate; but in the atonic gout of debilitated habits, bathing, if permitted,

mitted, ſhould be repeated once a day, and that in the evening.

In the former, the fits are more regular than in the latter, and terminate ſooner; for when the body has been long afflicted with the gout, an univerſal *atonia* or debility is generally the conſequence, and the fits are more uncertain, vague, tedious and diſtreſſing; under which circumſtances, it often happens, that no remedies give relief.

After bathing, the legs and feet ſhould be gently ſcraped, if ſufferable, with a blunt wooden ſpatula *, by which means, if any of the calcareous particles ſhould have been attracted through the pores, or ſhould lie on the ſkin, they may be removed.

If theſe particles, or ſcrapings be put on paper, and left in the air to dry, they adhere together †.

If theſe particles ſhould not tranſude, nor be diſſolved or attracted in the bath; yet the legs and feet ſhould be thoroughly

* Shaped like the ivory folding ſtick that ſtationers uſe.

† They ſeem compoſed of calcareous particles and animal mucus, in different proportions.

wiped with a cloth and gently rubbed, that the pores may be as much liberated from obſtruction as poſſible. Warm ſtockings of the *fleecy hoſiery* ſhould be then put on, and the patient ſhould be conveyed to a warm bed; by which means a mitigation of pain, reſt, and inſenſible perſpiration are often procured. If theſe happy effects ſhould not happen in the firſt few bathings; yet by a repetition, they frequently are obtained.

If the bathing ſhould be repeated in the morning, the patient ſhould be put to bed for an hour or two, and after that, if diſpoſed to ariſe and ſit up, he ſhould ſuffer the perſpiration to ſubſide, and the warmth to gradually cool: but all theſe circumſtances ſhould, in ſome meaſure, depend on the individual conſtitution of the patient, the nature of the gouty fit, the temperature of the air, the ſeaſons of the year, &c. &c., all which may be conſidered by the medical practitioner, or determined by the good ſenſe and experience of the afflicted patient.

During

During bathing, patients may uſe thoſe drinks, that their ſtomachs have been moſt accuſtomed to; but moderation is recommended in all caſes.

In ſome inſtances of bathing, the baths, in a few days, have produced a favourable criſis; copious diſcharges of earthy particles have been depoſited in the urine, the fit has ſoon terminated, and this moſtly in inflammatory caſes and robuſt conſtitutions. In the flying and *atonic* gout, eaſe has been procured immediately, in ſome patients, in others not; but, in general, the fits have been greatly abridged; by which the digeſtive and other powers neceſſary to life have not received ſuch ſevere ſhocks, as when the diſorder has been left to nature, or treated by any other method; the mind has been more tranquil, and the ſtrength of patients has been reſtored ſooner than otherwiſe is generally experienced *.

* Theſe facts can only be aſcertained by comparing the preſent fit with the true hiſtory of thoſe formerly ſuffered under different treatment; but it may be obſerved, that while we ſuffer a preſent pain we are apt to think that the worſt, forgetting what was paſt.

The *number* of times the bath ſhould be repeated depends on circumſtances; the ſooner the fit terminates, the ſooner the baths may be omitted; but after the pains of the fit have ceaſed, the baths ſhould be repeated three or four times.

In the intervals of fits, the baths may be uſed once or twice in a month; they will contribute to ſoften and remove callous ſubſtances about the feet; open the pores without relaxing, and render the extremities leſs liable to attacks.

During the fits of the gout, when the parts have been bathed in the intervals, the ſkin will make leſs reſiſtance to the inflammation, the ſwellings of the feet will be attended with leſs pain; there will be a greater certainty of the gout forming in the extremities, and leſs probability of its attacking the head, cheſt, ſtomach, or other important internal parts, that commonly endanger the patient's life.

## *On the medical Treatment of the Gout during the Fit.*

The principal intentions of medicine, during the paroxyſms of the gout, are:

1. To prevent the head, lungs, ſtomach, diaphragm, or other internal parts from becoming the ſeat of the diſeaſe.

If the head be attacked, and not promptly relieved, apoplexy, lethargy, palſy, or death have ſuddenly been the conſequence.

If the lungs, or diaphragm, ſudden difficulty of breathing, from obſtructed circulation in the venal ſyſtem of the lungs; if in the heart, intermittent pulſe, or ſpaſms, ſyncope, or faintings, death.

Though in ſuch ſerious attacks, all medicine, however ſkilfully applied, may *fail*; yet it is the duty of the art to divert, if poſſible, the gouty particles from thoſe vital parts; or if *there*, to attract them to the extremities.

In all inſtances, where ſuch attacks may be *apprehended*, the patient ought to bathe not in warm water only, which is a common practice, but the feet and legs ſhould be retained a conſiderable time, if practicable, in the muriatic bath; after which, being placed in a warm bed, a gentle perſpiration ſhould be promoted by antimonials in very ſmall doſes, joined with cordials, volatiles, powdered ſnake root, or Minderarius's ſpirit, camphorated ſolution *, tincture of ſnake root, guaiacum, or any other ſtomachic and nervine diaphoretic, conſulting always the patient's peculiar habit, preſent ſtrength, &c., what has formerly agreed or diſagreed. The antimonials will accord beſt with the robuſt, leaſt with the delicate, irritable, and debilitated. The ſtomach ſhould be attended to, and bitter ſtomachics preſcribed, or carmi-

* The ſolution of camphor I recommend in my *Treatiſe on Nervous Diſeaſes*, compoſed of camphor diſſolved in ſpirits of wine, mucilage of gum arabic, and water, is preferable to camphorated julep, becauſe the doſe of camphor can not only be aſcertained, but the volatile particles do not fly off by being mixed with warm water, &c.

natives,

natives, wine, ſpirits, and water, &c., according to circumſtances *.

If the head, cheſt, or ſtomach ſhould be attacked, the uſe of feet baths will be highly adviſable; as they are likely to attract the gouty particles, promote a warmer and freer circulation in the legs, feet, or hands.

In attacks of the natural, animal, or vital functions, if violent, the extremities, generally, become chilly or cold, the blood itſelf is there firſt impeded, and afterwards coagulates. Venal and cellular obſtructions or coagulations of the blood, are the cauſes of that coldneſs of the feet and legs, which generally preſage death. It muſt, therefore, appear extremely rational, that the reanimation of the ſinking nervous ſyſtem, and promotion of a freer circulation of the blood in the feet, are the only probable

* Whoever would wiſh to know more on the treatment of *valetudinarians*, nervous, irritable, and bilious patients, &c., may conſult the Treatiſe on thoſe ſubjects, where all nervous ſenſations and ſymptoms are traced up to their ſources, and methods of treatment amply delivered, with numerous preſcriptions.

means

means of preſerving the patient's life, in ſuch dangerous ſituations.

The inteſtines, during the fit of the gout, ſhould be kept gently open, flatulency or wind prevented generating by *calcined*, or common *magneſia*, with or without *lac ſulphuris* in chamomile tea, peppermint water, or bitter infuſion to the more vigorous; but to the nervous and debilitated, powdered rhubarb, ginger, and calcined magneſia, or ſoap or aloetics and rhubarb, or any light aloetic, to which the patient has been accuſtomed, joined with the gum pill, may be uſeful.

*Volatile alkali and bitters*, with cordials, correct fixed air, or neutralize it in the ſtomach, and thus remove flatulency. In other reſpects, ſymptoms as they ariſe, ought to have their cauſes inveſtigated, by the rules of art, and removed or palliated. The fever that attends gout ſhould be treated differently; the robuſt and florid will, ſometimes, bear bleeding *, laxa-

* Bleeding ſhould be uſed cautiouſly, and never ordered in the *atonic* gout, with great debility. *Sydenham* obſerves, that bleeding never anſwered any curative intention in the gout, except in very particular inſtances.

tives

tives of infuſion, and tincture of ſenna, joined with ſoluble tartar: to others of a more delicate conſtitution, bitter aloetic laxatives joined with James's powder in very ſmall doſes. Minderarius's ſpirit and camphor with tincture of ſnake root are efficacious in ſome caſes; whilſt antimonials, in ſmall doſes given at diſtances, are better in others; in all arthritics, the *regular*, *irregular*, *atonic*, or *flying gout*, and their variety, ought to be always conſidered, and prudently managed without *violent doſes* of remedies. The gout may be gently *led*, but not *driven* out of the habit. In cold weather and winter, gouty perſons ſhould keep much in bed during the paroxyſm, in ſummer not;—numbers have loſt their lives through inattention to thoſe circumſtances, by receiving ſudden cold.

It is denied, that any treatment can be judicious unleſs applicable to the particular individual, times and ſeaſons of the year, nature of the fits, &c.; for what may be excellent to one perſon, may prove hurtful to another. It may be uſeful, therefore, to

to deliver ſome hints concerning individual conſtitutions, ariſing from long obſervation and practical experience; for though it may be very difficult to ſelect a proper arrangement for all habits and circumſtances, yet an imperfect attempt may be, in ſome degree, uſeful, particularly to the inexperienced.

## *The Corpulent.*

Corpulent perſons afflicted with the gout, if of a florid complexion and ſhort necked, are ſubject, in the latter part of life, to apoplectic fits, lethargy, difficulty of breathing. Theſe ſhould be bled, or cupped occaſionally, have a ſeton in the neck, be treated cautiouſly by evacuants, and ſhould obſerve a *very dry* and rather abſtemious *diet*, in order to keep the veſſels from repletion or fulneſs. *Corpulent perſons* of a *palid* complexion, are ſubject to dropſies, aſthma, difficulty of breathing, water in the cheſt or pericardium, ſinkings and lowneſs. Theſe patients have a ſuperabundance of ſerum, and are deſtitute of red particles in the blood; ſerum is to be evacuated

occaſionally by rhubarb, ginger, and large doſes of cremor tartar, or with cremor tartar, and jalap, if admiſſible, or aloetics. If there be no cough, chalybeates and tonics are always proper.

If an aſthmatic cough ſhould attend, the ſteel is contra-indicated, and ſquills, ammoniacum, ſagapenum, &c., are proper; as a tonic, if admiſſible, Hoffman's anodyne liquor, and ſuch preparations, may be preſcribed.

### *Thoſe of a ſlender and lean Habit of Body.*

Theſe are to be conſidered in two points of view, independant of the mind being more or leſs irritable. The florid and ſlender ſhould be treated by mild antiphlogiſtics and gentle laxatives of rhubarb and *tartarum ſolubile*, or with *diuretic ſalt* and bitters, if their ſtomach will bear ſuch practice; but the pallid require warm ſtimulating cordials and tonics; ſoap and rhubarb or aloetics are in theſe the moſt proper laxatives, &c., if they have not the piles.

### *Mental Conſiderations.*

The mental ſenſations from the calmeſt ſtate to the greateſt degree of ſenſibility or irritability ſhould be conſidered; the *placid* require volatiles, ſtimulants, and tonics; and the *irritable* nervine ſedative remedies, that allay irritation, ſuch are camphor, valerian, the fetid gums, gum pill, &c.—*Opium* ſhould be given very cautiouſly, leſt it produce delirium or coſtiveneſs, and lock up what ſhould be evacuated.

### *The Robuſt.*

Theſe require occaſionally powerful evacuants, a moderate diet, and as much exerciſe as they can bear, when the fit be not preſent.

### *The Debilitated.*

Theſe require ſtomachic laxatives occaſionally, and tonics of bark, ſteel and vitriolic preparations with bitters, &c.

*Recent Gout.*

When the gout firſt appears, in ſome conſtitutions it may, I believe, be cured by ſtrict regimen and by taking *lac ſulphuris* and *calcined magneſia* daily; but no expectation of cure, by theſe remedies, need be formed; for in all my experience, I ſcarce ever could prevail with any gouty patient to live a ſufficient length of time by rules, or purſue any plan, however judicious, ſo as to give a reaſonable expection of curing the tormenting diſorder: but what I have ſeen done by diet and medicines makes me conclude the diſorder may be rendered milder.

*Old and inveterate Gout.*

The cure is generally *impoſſible*. The only thing which medicine ought to attempt, is to keep the fits diſtant by invigorating the habit without heating it, and by preventing the gout, during the fits, from attacking the vital and animal functions.

In the former part, it is aſſerted, that

reaſons ſhould be given why the gout after repeated fits is generally incurable * ?

As

* 1. In the firſt gouty fits the ſoft membranous parts are all in a ſtate of violent diſtention ; ſome of the cells of the cellular ſtructure are often ruptured, as likewiſe many minute veſſels. The *tela celluloſa* is proved to demonſtration to form all the parts of the body, muſcular fibres excepted. In the diviſions and interſtices of muſcular fibres the cellular ſtructure is obvious all through the minuteſt parts, abounding with veſſels, &c.

II. In every ſucceeding fit the ſame violence produces the ſame effects, and every time freſh ruptures or deſtruction of parts enſue.

III. The veſſels and cells, thus ruptured, become generally, if not always, obliterated ; the diſeaſed parts become harder, reſiſt the gouty inflammation more obſtinately, and occaſion ſucceeding fits, if the body be ſtrong, to be more and more violent, painful, and tedious.

IV. In proportion to the great number of ſucceeding fits, their violence and continuance, frequency, or diſtance, ſo muſt proportionably a greater number of cells of the *tela celluloſa* or veſſels become one confuſed maſs, and quite different to their original ſtructure.

When calcareous matter burſts from the veſſels or cells, and is depoſited in the toes or feet, all the ſpaces it occupies, forming what are called chalk ſtones, are parts detached from their original adheſions, whether membranes or cutis, &c. When the ſwelling breaks, or is opened, the white matter iſſues, evidently of calcareous particles and coagulable lymph, in different proportions ; then an ulcer follows, which is generally very obſtinate in cure, according as the original rupture of cells or veſſels were deep or more ſuperficial.

As no method as yet has been diſcovered to prevent fits of the gout after the diſorder has been long in the conſtitution, as the ravages that diſorder commonly makes in particular cannot be obviated, as the affected parts can never be reſtored to their original ſtructure and functions, and as after each fit there is commonly left ſufficient ſeeds or particles in the blood for the reproduction of the diſorder by accumulation, the reaſons why the gout is *incurable* when *inveterate*,

ficial. The diſeaſed parts afterwards are liable to freſh extravaſations of ſimilar matter from future fits. All theſe facts my own experience, as well as the obſervations of others, fully confirm.

This repeated deſtruction of parts by reiterated inflammation and reſiſtance of parts, before already diſeaſed, renders the ſofter membranous ſubſtances harder than they were naturally before the fit of the gout.

v. Theſe reiterated fits, by rendering the membranous parts leſs flexible, cauſe all that ſtiffneſs which is experienced about the joints of gouty perſons, eſpecially thoſe who have had the diſorder many years.

vi. The parts, therefore, thus deſtroyed, or veſſels thus obliterated, cannot be reſtored, but retain the ravages of the diſeaſe with a partial vaſcular ſyſtem, merely ſufficient to circulate a proper quantity of fluids to preſerve the life or warmth of membranous parts thus affected.

vii. There-

*inveterate*, muſt appear obvious to every reflecting phyſician *.

## *The Gout without Chalk Stones.*

The gouty paroxyſm may be treated ſafely and advantageouſly by the gout acid baths, &c.

VII. Therefore, as theſe effects of repeated fits of the gout can never be either prevented when the diſorder has been inveterate, nor the diſeaſed parts reſtored to their priſtine vigour, without the creation of new cells, new veſſels, new nerves, and the original flexibility of the parts ſo diſeaſed, which is impoſſible by human art, it follows, no *radical cure* can ever be obtained, but every freſh fit muſt produce freſh miſchief, and the greater number, much more remote muſt be any probability of cure.

Add to all theſe reaſons, *unſound viſcera*, the *perverſion* of the *ſecretions* and *excretions*, the want of *due digeſtion*, *chylification*, *ſanguification*, and the univerſal debility of the nervous and moving powers; all which, collectively conſidered, will explain the cauſes why the gout is incurable, eſpecially if inveterate and in advanced life.

* The effects of the gout, which have been delivered, are not viſionary nor hypothetical, but practical, and demonſtrable by diſſections, which I have repeatedly made.

*The*

*The Gout with Chalk Stones attended with great Debility.*

In ſuch caſes I have ſeldom recommended the baths, and therefore cannot ſpeak with certainty of their ſucceſs, but am inclined to think them, or any thing elſe, except palliation by mild remedies, of little utility, when the body be much debilitated and the patient greatly advanced in life.

*The Fits that are very inflammatory and ſhort*

Are to be treated generally by a light antiphlogiſtic plan, by volatile ſaline draughts or James's powder, or any ſimilar antimonial, diaphoretics, the bath, &c.

*The Gout leſs painful, vague, flying from Part to Part and long continuing.*

This ſpecies of gout is called by ſome atonic and miſplaced, and is, in general, ariſing

ariſing from debility in the moving powers, or a want of due energy in the circulation. The morbid matter circulates from one part to another, ſeemingly from the communication of the cellular ſtructure of the *telæ celluloſa*, and fixes often on the weakeſt.

If it fix on the coats of the ſtomach, it ſometimes produces inflammation, violent pain, nauſea, ſickneſs, vomitings, tremors, and ſpaſms on the diaphragm; hence hiccoughings, difficulty of breathing, faintings, &c. In the membranes of the brain, pain, diſtention of veſſels, apoplexy, lethargy, and palſy.

In all ſuch ſymptoms the diſorder, if poſſible, ſhould be attracted to the feet, by means of the acid baths; which ſhould in ſuch deſperate caſes be often repeated and continued as long as bearable.

Internally ſtomachics, cardiacs, bitters, ſtimulants, and diaphoretics of ſnake root, muſk, caſtor, camphor, &c., are proper *. The bowels ſhould be kept lax.

* For the means of removing the nauſea and vomiting, and other affections of the head and ſtomach, &c., the book on Nervous Diſeaſes may be conſulted.

*The Gout accompanied with Gravel or Stone.*

In ſuch caſes, ſoap and rhubarb with the Chio turpentine in the form of pills and oleaginous mixtures united with the fixed alkali, to which may be added the oleum juniperi, are moſt proper, and ſometimes the univerſal warm bath; which may be compoſed of the muriatic acid and tepid water in more diluted proportions. I have known the baths uſeful in gravelly complaints, &c.

*The Gout attended with bilious Complaints.*

There are two oppoſite ſpecies of bilious complaints; the one from a redundancy of bile irregularly coming to the duodenum, in which caſe bilious vomitings and purging; the other from obſtruction either in the liver itſelf, or in the bile ducts, by which either a proper quantity of bile is not ſecreted, or conveyed to the firſt inteſtine or duodenum.

In the firſt the bile ſhould ſeldom be brought upwards by vomits, as is too common

a practice, unleſs it be impoſſible to unload the ſtomach of the bile by any other means. The bile ſhould be conveyed downwards by infuſions of ſenna, cremor tartar and rhubarb, or by ſome ſlight aloetic given in ſmall, but repeated, doſes, until the bile be thoroughly removed from the ſtomach and inteſtines. Then bitters and ſlight tonics may be neceſſary to ſtrengthen the ſtomach and allay its irritation, but aſtringents are generally improper, as likewiſe opiates, for they tend to lock up the offending matter.

In the ſecond inſtance, when the bile be either not ſecreted in ſufficient quantity in the liver, or if it be impeded in its paſſage through the ducts, occaſioning *whitiſh*, dry and clay coloured *excrements*; the obſtruction ſhould be attempted to be removed by detergent laxatives of ſoap, aloes, &c. rhubarb joined with ſmall doſes of *ſal ſodæ*.

A quarter of a grain of calomel joined with three or four grains of any aloetic pill, is an excellent remedy not only to remove coſtiveneſs but gradually the obſtruction. Such a pill may be taken every night; and before dinner and ſupper the bitter infuſion

and tincture with half a dram or two ſcruples of the ſal diureticus made into a draught. Theſe are ſucceſsful remedies in ſuch caſes when long continued.

Rhubarb and tartarum ſolubile in ſimple peppermint water have their advantages in the more robuſt and inflammatory habits.

## *The Gout in the early Time of Life,*

May probably be cured, if the patient would conform to a ſtrict regimen, and has *ſound viſcera*; but experience proves that *few, very few*, gouty patients will change, what are conſidered the comforts of life, for the greateſt certainty of cure. One very great cauſe of the gout, in an early period of life, is, that injudicious practice of giving children, or youth, whilſt growing, wine, and ſuch like improper liquors, entailing on them much future miſery.

### *The Gout in the latter Part of Life*

Is always incurable for the reaſons already delivered; palliating the ſymptoms, and invigorating the habit is all that medicine can rationally expect.

### *The Gout when the Fits are diſtant.*

In the intervals the conſtitution ſhould be attended to, and the body invigorated; the baths may be uſed once or twice a month. There can be no objection to diſtant fits provided the nervous ſyſtem be not depreſſed with thoſe miſerable ſenſations of low ſpiritedneſs, which ſome gouty patients, poſſeſſed of great nervous ſenſibility, experience.

If nervous attacks be frequent or conſtant, they may be treated in the manner I have recommended in the treatiſe on thoſe complaints.

*When*

### *When the Fit be frequent.*

The fits of the gout are frequent in thoſe who have long had the diſorder, and whoſe bodies are feeble, or it happens to thoſe who are very free livers and great wine drinkers. A *batch of claret* will, in ſome arthritics, at any time, produce a fit of the gout.

In ſuch, greater moderation ſhould be recommended, and their conſtitutions ſhould be invigorated, if they permit medical aſſiſtance, during the intervals, by tonics of bark, ſteel, &c., according to the peculiar habits of the patients.

### *The Gout complicated with Dropſy.*

From projects of low diet, chiefly vegetable, ſmall beer, water, milk, and ſuch like irrational practices, when applied to perſons in years who have generally lived freely, has the gout been converted into the dropſy: from bleeding piles or other hæmorrhages, the ſame has happened. In

ſuch

ſuch caſes the patients ſhould be ſupported by tonics, as bark and the vitriolic acid, if the ſtomach will bear it, vitriolic æther or ſteel and bitters, if there be no contra-indication to their uſe, as difficulty of breathing, cough, &c.

The fits of the gout, under theſe circumſtances, are weaker, remain longer and often ſhift from place to place, and may be generally treated as the atonic; but if the vital parts become affected, death frequently is the conſequence; for water is often found in the cheſt or pericardium, on inſpecting the cadaver.

*On the Gout accompanied with Aſthma.*

In this caſe there is danger, at times, particularly in winter and in gouty fits, of ſuffocation, unleſs the lungs can be liberated. In ſome caſes bleeding or cupping may be uſeful; but theſe muſt be preſcribed cautiouſly, and only on urgent occaſions, and never in the nervous aſthma: but bliſtering on the *ſcrobiculus cordis* is generally neceſſary in ſuch caſes.

Mankind

Mankind know not the danger of the caſe when great difficulty of breathing happens, and are alarmed at bleeding, which in ſome inſtances, particularly in plenitude, is the moſt rational remedy. The patient ſuffering under an *orthopnæa* muſt inevitably die, if the veſſels of the lungs be not promptly depleted: bleeding is uncertain, and but a doubtful remedy; yet ſhould be uſed in dangerous ſituations.

Bathing the legs with the gout baths, are uſeful. Antimonials to promote perſpiration, and expectorants to raiſe expectoration, are neceſſary; but perhaps in ſome caſes an emetic of two or three grains of *antimonium tartariſatum*, James's powder, or ſquills, or ſmart purging, may be uſeful; but muſt not be repeated, leſt the ſtomach ſuffer more from the remedy than the diſeaſe. The lac ammoniacum, volatiles and ſquills in ſmall doſes, and properly adminiſtered, have their uſes. Every thing bracing, aſtringent, or tonic, in this caſe ſhould be carefully avoided *.

* The oil of anniſeed to one drachm, mixed with ſolution of camphor and mucilage of gum arabic, has produced excellent effects as a diaphoretic.

## *On the Management of gouty Patients in the Intervals of the Fits, &c.*

Amongſt the variety of cauſes exhibited in the former part of the work, what have been moſt productive of the diſorders, ſhould be firſt impartially inveſtigated, and, if practicable without injury to the conſtitution, ſhould be avoided.

Though all narrow ſchemes, or very great and ſudden changes of diet may be cenſurable and dangerous; yet gradual deviations may be inſtituted with great advantages.

*Leſs animal diet* and *wine*, or other liquors, may be very beneficial; in particular to thoſe who have good appetites, ſtrong digeſtive powers, and who uſe little exerciſe.

*Exerciſe* on foot and horſeback, or in a carriage, if practicable, is adviſeable: it agitates the viſcera, promotes the ſecretions and excretions, &c.

Perſons

Perſons inclined to much ſtudy and a ſedentary life ſhould moderate their meditations, and if they write, ſhould rather ſtand at a deſk than ſit. The immediate purſuits of ſtudy, eſpecially if intenſe, after dinner are injurious. Morning is the time for meditation.

Thoſe, who have drank wine, may, at times, and with judgment, make a change for malt liquors, not new nor flatulent;—porter is better than new ale, ſtrong beer of a proper age is ſuperior to ſmall beer.

The *quantity* of liquids ſhould be regulated by the portion of ſolid food taken: moſt perſons *drink much more* than is neceſſary for health.

As gouty patients are generally nervous and irritable, whatever ſymptoms *valetudinarians* are ſubject to, will be found fully deſcribed and treated on, in the work on thoſe ſubjects, to which they are referred.

All young people ſubject to the gout, or whoſe anceſtors have laboured under that diſorder, ſhould *avoid ſuppers*, if liable to fullneſs, and make *light dinners* twice a week or oftener.

*Coſtiveneſs* ſhould always be prevented by the gentle opening medicines according to conſtitutions. For this purpoſe *lac ſulphuris* or *calcined magneſia* in ginger tea, or ſome light aloetic ſhould be frequently taken :— the former have infallibly cured many chronic rheumatiſms, and have done great wonders in relieving, though not in radically curing, arthritic complaints.

The *dry ſkin* ſhould be prevented by light antimonials, as *James's powder*, occaſionally taken, or two or three grains of the *antimonial powder* may be blended with *Rufus's pill*, which ſeems ſimilar to *James's* pill, and given twice or thrice a week : by theſe and ſuch remedies a dry ſkin is often removed and coſtiveneſs prevented. Tea and ſuch watry drinks ſhould be uſed ſparingly, as they relax the tone of the ſtomach.

If analogous reaſoning on many facts might be permitted in treating the gout, what has cured the chronic rheumatiſm, and hip gout under my own direction, might bid fair to anſwer important purpoſes, if long continued, which is the following very

very weak ſolution: but I only deliver this as a rational hint, having not yet ſufficiently experienced its efficacy in various arthritics *.

℞. Antimon. tartariſat.
Hydrargyri muriati āā gr. j. ſolve in
Aq. roſar. ℥viij. cujus ſumat. ℥ſs. exacte in coch. iv. infuſ. ſaſſafr. vel decoct. rad. ſarſaparillæ mane et nocte.

*Plummer's pill*, to one grain morning and evening, might be long continued on the ſame principle, but it is ſeldom well prepared, as the ingredients require at leaſt twelve hours rubbing.

To thoſe who cannot, or do not, approve of the foregoing, the following light alterative, long continued, might prove very advantageous:

℞. Hydrarg. ſulph. rub. ʒvj.
Pulv. e tragacanth. c. ℥ſs.
—— ſal ſodæ ʒij. M. accurate, f. pulvis dividendus in xvj. partes quarum ſumat j. mane et nocte in coch. ij. aquæ menth. pip.

The *aqua mephitica alcalina*, joined with bitters, might, if for years continued, bid fair to remove the cauſes of the gout.

* The *hip gout* has been often cured by this remedy, with or without the baths, both in private practice and at the St. Mary-le-Bone Infirmary, as likewiſe by very ſmall doſes of calomel and pulvis antimonialis, &c. &c.

*Borax*, in very ſmall doſes, with bitters, might prove beneficial.

*Borax* diſlodges the inſpiſſated mucus on the tongue in fevers, its particles intimately diſſolved in aqueous menſtruums and much diluted might enter the lacteal ſyſtem with the chyle, and aſſiſt in diſuniting the gluten that ſo predominates in the gout.

The *ſpongia uſta*, the *foſſile* and fixed *alcaline ſalt*, the *Æthiops vegetabilis*, and ſuch like remedies in very ſmall doſes with bitters, under judicious management and long continuance, might prove very beneficial: but few gouty patients have ſufficient patience and reſolution to perſevere in any plan, the leaſt likely to prove a radical cure, even, when the diſorder be recent; when inveterate, little ſucceſs is to be expected. Theſe are only to be, in general, conſidered as uſeful hints; for my own experience has not hitherto determined their abſolute utility; a long time is requiſite to enable a practitioner to ſpeak decidedly; the obſervations of numbers can only confirm any doctrine.

Flatulent diet, beans, peaſe, ſallads, and greens, eſpecially the laſt, unleſs ſtewed, are

are improper; as likewiſe philberts, walnuts, cheſnuts, &c., fruits, tarts, &c.: for theſe are liable to create flatulency, and cholicky complaints, vomitings, &c., in the gouty ſtomach. If they have been imprudently eaten, and great coldneſs and violent pains in the ſtomach and bowels follow, with ſwelling and inflation from air or wind, an ℥iſs. of tincture of ſenna, ℥ivſs. of ſimple peppermint water, and ℥ij. of *calcined magneſia*, ſhould be mixed together, and two table ſpoonfuls ſhould be taken every hour or two until the bowels be opened, the wind corrected or expelled, and the pains, by thus removing cauſes, eaſed.

Carminative clyſters, with oil and *tinctura ſacra*, are proper.

After the bowels have been opened, then cordials and volatiles will be proper, and in ſome caſes a light anodyne may be added.

The feet and legs of perſons ſubject to the gout, as likewiſe the whole body, ſhould be kept warm; for theſe purpoſes nothing can be more uſeful than the *fleecy*

*hoſiery*

*hoſiery* in autumn, winter, and ſpring, in our mutable climate; in the ſummer callico waiſtcoats or ſhirts under the linen will be eligible. I have known both the gout and rheumatiſm greatly relieved by an attention to *warm cloathing*. In the latter diſorder the baths have proved very efficacious, as likewiſe in the *ſciatica*, or *hip gout*, as it is called.

*Lime water* and bitters are proper where acidities abound; *Seltzer water* where they do not.

The afflicted, through the miſery they ſuffer, the ill ſucceſs of whatever they attempt, the baſe impoſitions practiſed on them by medical adventurers and impoſture, all contribute to ſhake their faith, from which reaſon they ſubmit to more misfortunes than they otherwiſe might experience. If they would reſt ſatisfied without expecting a radical cure, by attempting which many have *loſt their lives*, and would they pay ſtrict attention to proper well conceived diet, with the uſe of very *little* and *gentle* medicine, I am certain, their miſerable pains might be much mitigated, and their lives rendered

more

more comfortable.—Theſe are the principal ſentiments, at preſent, I have to offer on a diſorder that has, in all ages, and probably will frequently baffle the acuteſt penetration and longeſt experience in phyſic: the reaſons of which have been amply diſcuſſed in different parts of this treatiſe, to prevent, if poſſible, in future, many groſs impoſitions. The primary object in medicine ſhould be to cure diſeaſe; the ſecondary to diſcover the true cauſes of its difficulty or impoſſibility. This knowledge is the real diſtinction that characteriſes rational medicine from uncertain and irrational empiriciſm *.

* Amidſt a number of impoſitions that might be produced, *Le Fevre*'s claims the preference as an ingenious contrivance to raiſe money under deluſive pretenſions. This genius had a ſubſcription opened amongſt the gouty of one hundred guineas each, and by the *firſt ſubſcription* actually acquired five thouſand guineas. If I recollect right, a ſecond ſubſcription was opened, to which many ſubſcribed; then the artiſt moved off, under pretence of going to Germany to prepare his powders, but never returned, leaving his gouty patients to reflect on their credulity, without any mitigation of their diſorder.

## THE CONCLUSION.

THE whole that has been advanced is ſubmitted, with the greateſt reſpect, to profeſſional conſideration: learning and candour will perceive the difficulty of producing ſatisfactory ætiological facts, or deductions by reaſoning on a diſorder ſo abſtruſe, various, and contradictory in its appearances in different ſubjects. What is here produced, however, may be a ſpur to others, and new experiments may be added, which may not only more ſatisfactorily explain the nature of the diſorder, but diſcover new remedies either to prevent the cauſes or remove the preſent defects in the cure. I ſhall myſelf, at all opportunities, ardently proſecute this and every other medical object worthy of attention: it is a tribute juſtly due to the public and learned, for their favourable reception of the Treatiſe on Female and Nervous Diſeaſes, and other works, as likewiſe for the confidence many years enjoyed as a medical

practitioner. All that the author requeſts is, that a candid peruſal of the theoretical doctrines contained in the book, and a fair and impartial trial may be made of the baths, and other modes of treatment recommended; for time and proofs alone can determine on their merits or defects. They ſhould be accurately and impartially ſcrutiniſed by thoſe who are verſed in all the lateſt modern diſcoveries, and not cenſured by thoſe injudicious critics who have neither time nor inclination to make themſelves maſters of the ſubject, and whoſe knowledge extends little farther than the great Boerhaave's ſyſtem.

The afflicted, it is hoped, will not be deceived by *falſe alarms*, nor diverted by prejudices from attempting the relief of their miſerable diſorder. It is preſumed, that theſe attempts to relieve human miſery will not meet unmerited oppoſition from thoſe who ſhould promote the welfare of ſociety, and who ought to adopt whatever is rational and unreſervedly communicated. To oppoſe uſeful doctrines, without due reflection and fair trials, becauſe they are *new*,

is, to inhumanly deprive the afflicted of even a probability of relief. Such conduct, under the deluſion of whatever ſpecious pretext, ought to be reprobated by all learned and honourable men: it ſhuts the door againſt the free diſcuſſion of an art at preſent imperfect; tends to diſcourage ſtudy and induſtry in making diſcoveries, and proves a check to all intended medical improvement.

THE END.